DOCUMENT RESUME

ED 272 513 SP 028 026

AUTHOR	Lasley, Thomas J., Ed.
TITLE	Issues in Teacher Education. Volume II: Background Papers from the National Commission for Excellence in Teacher Education. Teacher Education Monograph No. 6.
INSTITUTION	American Association of Colleges for Teacher Education, Washington, D.C.; ERIC Clearinghouse on Teacher Education, Washington, D.C.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
REPORT NO	ISBN-0-89333-043-4
PUB DATE	86
CONTRACT	400-83-0022
NOTE	239p.; For a related document, see SP 028 025.
AVAILABLE FROM	American Association of Colleges for Teacher Education, One Dupont Circle, NW, Suite 610, Washington, DC 20036 ($14.00).
PUB TYPE	Information Analyses - ERIC Information Analysis Products (071) -- Reports - Descriptive (141)
EDRS PRICE	MF01/PC10 Plus Postage.
DESCRIPTORS	Beginning Teachers; *Educational Trends; Government Role; Minimum Competency Testing; *Preservice Teacher Education; Teacher Certification; Teacher Education Curriculum; Teacher Evaluation; *Teaching (Occupation)
IDENTIFIERS	*National Commission for Excellence in Teacher Educ

ABSTRACT

The articles in this monograph provide a framework for reflecting on a variety of educational issues. In section one the historical roots of teacher education are examined. The second section deals more directly with what a teacher is and how the definitional properties of "the teacher" begin to dictate a curriculum for teacher education. The impact of regulation and testing on teacher education is the focus of the third section. The final chapter describes the nature of the federal government's involvement with teacher education. The following papers were selected from papers prepared for the National Commission for Excellence in Teacher Education: (1) "An Evaluation of the Rationale for Required Teacher Education: Beginning Teachers with and without Teacher Preparation" (Martin Haberman); (2) "From Quantity to Quality Teacher Education in Britain" (Harry Judge); (3) "Recent Reports on Education: Some Implications for Preparing Teachers" (Edward J. Meade); (4) "The Nebraska Consortium for the Improvement of Teacher Education" (Mary M. Kluender); (5) "The Implications for Teacher Education of Computer Technology" (Barbara Dubitsky); (6) "Preparing Teachers for Schools of Choice" (Mary Anne Raywid); (7) "Defining the Excellent Teacher Preparation Program" (Norma Nutter); (8) "Toward a More Desirable Profession" (Sharon P. Robinson); (9) "Testing Teachers for Certification and Recertification" (Eva C. Galambos); (10) "Performance-Based Certification in Georgia: Present and Future" (J. William Leach and Lester Solomon); (11) "Post Certification Development of Teachers and Administrators" (Richard C. Wallace); (12) "Quality Control of Teacher Preparation Programs through the Program Approval Process" (Herman E. Behling); and (13) "Excellence in Teacher Education: Options for a Federal Partnership" (David H. Florio). (JD)

TEACHER • EDUCATION • MONOGRAPH • NO. 6

ED272513

ISSUES IN TEACHER EDUCATION

Volume II: Background Papers from the National Commission for Excellence in Teacher Education

Thomas J. Lasley, Editor

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American Association of Colleges for Teacher Education

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Issues in Teacher Education

Volume II: Background Papers from the National Commission for Excellence in Teacher Education

Thomas J. Lasley
Editor

Published by
American Association of Colleges for Teacher Education

Prepared by
ERIC Clearinghouse on Teacher Education

1986

CITE AS:
Lasley, Thomas J. (Ed.) (1986). *Issues in Teacher Education. Volume II: Background Papers from the National Commission for Excellence in Teacher Education.* (AACTE-ERIC Teacher Education Monograph No. 6). Washington, DC: American Association of Colleges for Teacher Education.

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Library of Congress Catalog Card Number: 86-80882

ISBN 0-89333-043-4

Series Editor: Elizabeth A. Ashburn, Director, ERIC Clearinghouse on Teacher Education. Dr. Ashburn also serves as Director of Research and Information Services for the American Association of Colleges for Teacher Education.

OERI
Office of Educational Research and Improvement
US Department of Education

This publication was prepared with funding from the Office of Educational Research and Improvement, U. S. Department of Education under Contract No. 400-83-0022. The opinions expressed in this report do not necessarily reflect the positions or policies of OERI or DOE.

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Introduction

The issues surrounding teacher education are complex and evolve out of the myriad social and political contexts in which teachers and teacher educators function. Few would doubt that teaching today is different from what it was even a decade ago. The new demands on students, the multiple needs of children, and the extreme pressures of classroom and daily life in some social settings make the teacher's life one filled with constant decision-making. Such decision-making was evident when Phillip Jackson wrote *Life in Classrooms;* it is even more manifest in the time of *Horace's Compromise.* The climate of teaching and teacher education has changed, and those changes are making severe demands on school social systems that were formed in different times.

Teacher education is intended to improve the teacher's decision-making ability. How this is accomplished is the object of substantial debate, which has been stirred and has become even more heated as a result of the increased involvement of legislators and politicians in educational policymaking. Regrettably, noneducators seeking to improve education usually proffer simple answers: test prospective teachers more, attract better quality students, expand teacher education, or eliminate teacher education. And because teacher educators are so dependent upon the resources of noneducators (legislators) or other educators who espouse different political or philosophic perspectives (e.g., state department officials or university presidents), they often acquiesce to demands for change or go to extremes to prove their worthiness (e.g., warranty assurance).

The chapters in this volume shed light on both the debate and the direction of future practice. In the first section the authors examine the historical roots of teacher education (Where have we been?) and outline how practices grounded in history have efficacy for current educational policy. They also provide documentation concerning the "timeless" nature of problems. For example, whether teacher education should be consecutive (general education and specialization coursework followed by pedagogical training) or concurrent (teacher education occurring within the context of a traditional four-year degree program) is not a new or a uniquely American dilemma. The British, as Judge astutely points out in Chapter 3, are dealing with the issue in their own reform efforts.

The second section deals more directly with what a teacher is and how the definitional properties of "the teacher" begin to dictate a curriculum for teacher education. Understanding what teachers do with students, practically and in an a priori sense, establishes a framework for their preparation. It is foolish to educate teachers to work in schools that do not exist or to prepare idealists who are unable to cope with a real world. Equally fatuous is the preparation of teachers at an entirely practical level, where preservice teachers are expected to accept the extant practices of school life as givens or where they fail to reflect on or to challenge the system to make it a more positive atmosphere for student (and teacher) growth and development.

The impact of regulation and testing on teacher education is the focus of the third section. In a litiguous and regulation-oriented society, it should not be surprising that many educators and noneducators expect to achieve Nirvana through additional teacher testing and evaluation. The authors in Chapters 7–11 describe various aspects of the many teacher quality-control efforts. Perhaps the most important message of the authors is a tacit one: quality cannot be mandated or required. Quality is an outgrowth of commitment to the profession and to learning. Tests and performance indicators assess for minimum competence; they measure at a minimal level the knowledge and skills of prospective teachers. Unfortunately, many ineffective teachers are technically competent. What they often lack is something that is not measurable through low, or perhaps even high-inference assessment: a valuing of learners and personal learning.

The final section of the book is a single chapter by David Florio. The federal government has been actively involved in education since the early 1950s, and its role has been particulary evidenced since the passage of P. L. 94–142. Florio describes the nature of federal involvements and outlines a set of recommendations to direct future endeavors.

The articles in this book, taken as a whole, provide a framework for reflecting on a wide variety of educational issues. They are suggestive of the complexity of teaching, and they provide a foundation for enhancing our understanding of teacher education.

Section One

Teacher Education: Historical and Political Perspectives

In many respects, the struggle for educational excellence in teacher education is a struggle of changing societal values, needs, and dispositions. And regrettably, like puppets in the hands of a puppeteer, teacher educators in America and Great Britain have been forced to respond to the tugs of society's demands rather than to create the conditions under which ideal teacher training should occur. The manipulations and machinations that have occurred in the United States have been rather oblique, whereas in the British system, as Judge points out, the limited number of authorities enables a decision-making that is direct and immediate.

What is striking about these first two chapters is the "time-less" character of the debate evidenced in the current educational literature. That teacher education policies and practices have a certain cyclical nature is hard to dispute. The critical question is whether the cycles are progressive or regressive. Is teacher education growing or dying? Are the debates moving teacher educators forward or are they simply creating new arguments for dealing with old problems?

One sees, for example, in the Haberman and Judge chapters, the powerful similarities and stark contrasts of the cycles of power and political debate. The American system of teacher education vests power within the hands of each state. States approve programs and monitor certification and licensure. States have and are able to exercise power, although they have been hesitant, with only a few exceptions (perhaps Florida), to close down specific teacher education institutions. Accreditation has been guided by those within the profession, but it lacks the clout frequently evident in other professions. Hence, even though NCATE can refuse to reaccredit a program, through state sanctioned program approval an institution can continue to matriculate, graduate, and certif-

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icate teachers (see Raths, Zych, and Wojtaszek-Healy, 1985). New efforts by NCATE are focused on how to militate against this phenomenon, but the multiple political forces manifested in American education make it questionable whether dramatic changes will occur in the near future.

In the British system, on the other hand, central government reduced the number of teacher education institutions by almost 60% in 15 years. Today, fewer British institutions are given the responsibility to prepare teachers for classroom assignments. In light of the myriad proposals by American educators to reduce the number of institutions responsible for teacher preparation by as much as one-third, the British system most certainly has practical attractions.

A second cycle evidenced in both chapters is the debate regarding concurrent vs. consecutive teacher education. Should professional (pedagogical) education training and subject matter preparation be presented concomitantly (concurrent) or should pedagogy be presented only after subject matter is learned (consecutive)? The British system has moved from the consecutive mode evidenced in 22% of its institutions in 1972 to a 54% level in 1982. Judge suggests that even with the Bachelor of Education (B. Ed.), which represents the only concurrent mode to the status of qualified teacher, "there has emerged a strong tendency in course planning to observe the principles of the consecutive philosophy."

The first American normal schools, opened by Samuel Hall, were, of necessity, grounded on a consecutive philosophy, with, as Haberman recalls, "the first two years . . . devoted to elementary and advanced studies of subjects such as mathematics. It was only in the third year that school teaching was taught." Since those early beginnings, teacher education has evolved to take many forms. Most recently in the United States, the concurrent mode has been dominant. In fact, many states have legislated that teacher education course offerings begin early in the collegiate preparation process and be logically and sequentially provided throughout the prospective teachers' curriculum; the programs must be, in essence, concurrently structured.

The concurrent pattern is being explicitly challenged by certain segments of the teacher education community. Powerful subgroups are arguing for a structure resembling the consecutive pattern, with prospective teachers beginning their preparation once they are accepted as teacher candidates. The candidacy stage begins after the prospective teachers have completed their higher education baccalaureate study.

A third cycle relates to the quantity vs. quality debate. Both the Americans and the British have confronted the problem of how best to provide a sufficient number of qualified teachers for classroom service. Intriguingly, their searches have led them to somewhat different policy positions. Within the British experience "the prevailing orthodox assumption" that Judge explicates is "that the statement of criteria, the machinery of visitations, the counting of course hours, the specification of content and method, the elaboration of licensing arrangements, will . . . lead to an improvement in quality." The quality concerns of the British deal with the problem of excess theorizing, especially characteristic of previous teacher training experiences in Britain. Prospective teachers have been steeped in theoretical foundations, but they have not been given practical opportunities to apply that knowledge in classroom settings. The by-product of this thrust toward "deintellectualizing" teacher preparation is a turn back toward apprenticeship models, similar to those that have dominated American philosophy, if not practice, during the past decade.

Haberman, on the other hand, notes that when demands for excellence and for the better quality teachers dominate American rhetoric, then the proposal to use liberal arts graduates becomes manifest. Americans, particularly noneducators, attempt to "re-intellectualize" teaching by deemphasizing pedagogical training (teacher-training) and by suggesting that the common sense possessed by a liberal arts graduate is sufficient to guide thoughtful practice. Unfortunately, although common sense is a necessary condition for effective teaching, it is not a sufficient one. Common sense suggests that extrinsic rewards (e.g., extra recess) will motivate students, when in actuality, researchers now know that rewards frequently have just the opposite effect (Deci, 1975; 1981). Common sense suggests that making students do extra work for certain acts of wrong doing (e.g., chewing gum, talking out of turn) will be efficacious; in fact, extra work usually has a deleterious influence on both the attitudes and subsequent behavior of students (Good & Brophy, 1984).

The British and the Americans have responded to the quality question with different answers. Perhaps, however, it is less important to determine or prove that a particular policy or philosophy is right than it is to ensure that teacher educators keep focused on providing better preparation practices for teachers. The short term effects of the struggle for improved teacher education will influence the design and structure of the curriculum for preservice teachers. The long term results are much more serious: They relate to the development of teaching as a profession and to teacher education as a serious field of inquiry.

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I

An Evaluation of the Rationale for Required Teacher Education: Beginning Teachers With and Without Teacher Preparation

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HISTORICAL CONTEXT

The history of teacher education in America, in a very real sense, can be viewed as one continuing effort to provide teachers with increasing amounts of subject matter in academic disciplines as well as with more pedagogy. The contention that pedagogic study somehow drove out liberal/general studies is not supported by historical fact. The first normal school, opened by Samuel Hall in Concord, Vermont, in 1823, had a three-year program: the first two years were devoted to elementary and advanced studies of subjects such as mathematics. It was only in the third year that schoolteaching was taught. The second and third normal schools in Lancaster and Lexington, Massachusetts, were scarcely more than primitive high schools for girls of 16 and boys of 17. Theirs was a curriculum that emphasized content such as mathematics, surveying, physiology, the Constitution, history, Christian piety, and morality. Only toward the end of the program was there some pedagogy, a chance to observe in the model school, and a demonstration of the student's ability to emulate the master's demonstration lesson. Prior to the Civil War, there were 11 normal schools in the United States. In addition, several municipalities started their own normal schools: Boston, New

York, Trenton, Philadephia, Baltimore, and St. Louis. While the programs were advertised as lasting two years, the majority of students attended for only a few months. It was, for many, an advanced elementary school, and its "graduates" returned to teach on that level. Most of the program was devoted to the study of elementary subjects with almost no pedagogy. There were, at the time, less than a half dozen treatises on teaching, and most normal school students were fortunate to see even one of them. The normal schools were according to Meyer (1957):

> the epicenter of hostility . . . the most ferocious adversaries, oddly enough, were the schoolmasters themselves who regarded the demand for professional training not only as so much piffle, but a slur on their competence and hence on their dignity. (p. 206)

What was known about pedagogy at the time seemed to make little difference on the schools, which continued to emphasize memory and rote training.

After the Civil War, the influence of Pestalozzi was felt on both the schools and the training of schoolmasters. The Oswego, New York, schools and the NEA (National Education Association) gave Pestalozzi's object teaching method its official endorsement. This method stressed the observance of concrete things and the ability of the pupil to communicate his observations. It upgraded the teaching of the 3 R's, geography, drawing, elementary science, and music. By the 1880's, however, the new influence was that of Herbart, who invented "the lesson" as it is still practiced in most schools. In the remainder of the century the influences of Froebel and Spencer were also felt in the schools and in teacher education.

In all cases it was obvious, clear, and redundant that the 19th century programs of teacher training were devoted primarily to upgrading the academic knowledge of teachers; whatever pedagogy was offered was merely a means of highlighting, connecting, or teaching subject matter to the would-be teachers themselves. The teachers were then expected to repeat the very same lessons, using the very same methods, with their pupils. The issue was not liberal arts subject matter versus pedagogy, but how to offer sufficient subject matter to the undereducated individuals who were preparing to teach.

The double function of the normal school—its review of basic subjects and its introduction to pedagogy—persisted into this century. The demands for more subject matter transformed two-year programs into three-and eventually into four-year teachers colleges and state universities.

The educational mission of the normal schools and the teachers colleges was not simply to prepare teachers: it was to provide "advanced" educational opportunities for poor people, those living in rural areas, individuals who could not afford to attend universities, and many who were not admissible to universities. The criticism over the past century that these institutions should offer more general/liberal studies consistently has been implemented by these institutions, but the changes have not stifled the critics' demands. It merely changed the criticism to "Those liberal studies lack university quality." Even the advent of schools of education within the great universities has not altered the demand for more liberal/general studies and fewer education courses. Indeed, the historical pattern seems to be that the more liberal studies are offered, the more they are demanded. One student from abroad recently asked: "If a secondary education student takes three years of liberal studies and one year of professional education, why is he a 'product' of the School of Education?"

There are several generalizations that might be made regarding the development of normal schools and teachers colleges: these institutions provided "advanced" education to many people who were without access to universities and who did not become teachers; they empahsized a teacher education based on technical/practical "how to"; they were largely uninfluenced by university traditions or the use of theory and research as the basis for courses. Finally, and most important, it was the universities themselves that generated all the theory and research that expanded school teaching into the education professions. The professional subject matters (i.e., learning, testing, exceptional education, human development, curriculum, research, and their numerous subspecialties) were all developed in our leading universities; they did not emanate from within the traditional forms of normal school and teachers college programs.

The specific debate of using liberal arts graduates versus those with professional training took its present form about a century ago in response to two trends. First, normal schools began training programs for secondary teachers—as high schools grew and needed more teachers. At the same time, universities established chairs in psychology, pedagogy, and education, and also began to prepare secondary teachers.

The development of whole new fields of inquiry was also occurring at a rapid rate within liberal/general studies. The fields of psychology and sociology burgeoned in the same period as did the explosion of knowledge in the sciences. A liberal education prior to 1893 was, essentially, a classical education. "Liberal arts" today are a vastly expanded, broad array of subspecializations about which there is little agreement. In most universities the "return" to the common core is a codification of what the present faculty can politically agree upon as its distributive requirements: It is not a "return" to anything as much as it represents the preferences and prejudices of the particular faculty members voting on the particular requirements.

Simultaneous to the growth of new disciplines in physical science, social science, and humanities (literary criticism, filmmaking, and oral history are just a few examples of very recent "liberating arts"), the disciplines that were to become the bases for professional education were being developed in the very same universities: Columbia, Johns Hopkins, Chicago, Iowa, Ohio State, and Stanford. The work of G. Stanley Hall, who established America's first laboratory in analytic psychology (Johns Hopkins, 1883), became the basis for child study, which ultimately became a universal requirement for all teachers of children. The work of Terman and Thorndike became the basis for standardized assessment—a required unit or course of study for all professional educators. The work of Dewey in connecting democracy with child development and school programs, established philosophy and curriculum as standard professional fare. In case after case, it was the scholars in the leading universities whose research and theoretic formulations established the knowledge bases of pedagogic study. In contrast, the normal schools and teachers colleges built upon the cumulated wisdom of practicing teachers and emphasized two realms of knowledge: the actual subject matter content that the future teachers would teach children and the specific techniques of how to teach these lessons. It remained for the leading universities to pioneer and lay out the fields of inquiry that became the basis of present teacher education programs—these include educational psychology and school learning; educational research; methods of teaching; the causes and educational treatments of learning disabilities; curriculum development; educational philosophy, history, sociology, and comparative education; and child, adolescent, and adult development. In recent years, theory and research in organizational sciences have added substantial content to the education of school administrators, while advances in psychology and assessment have added to the preparation of school counselors and psychologists.

In sum, the significant expansion of the knowledge base in professional education developed during the very same period as the expansion of liberal/general studies. The developers of this knowledge expansion were not vacuous pedagogues from the normal schools but some of the most prestigious, most highly honored scholars in our leading universities.

In truth, the universities largely ignored the advent of teacher training institutions until these institutions got into the business of preparing high school teachers. Then, as now, the advocates of liberal studies criticized the professional educators as lacking substance while the professional educators criticized the universities as unresponsive to life, to practices in the schools, and to their own new discoveries. It is interesting that even when liberal studies were limited primarily to the classics (the period prior to World War I), it was argued that this knowledge was all a graduate would need to be an effective teacher in a Western outpost, a rural area, or an inner city neighborhood. A quote from a critic of the time (Bain, 1893) demonstrates the continuous debate about liberal studies and their usefulness:

> The thorough-going advocates of classics hold Latin and Greek to be indispensable to a liberal education. They do not allow of an alternative road to our university degrees. They will not admit that the lapse of three centuries, with their numerous revolutions and their vast development of new knowledge, makes any difference whatever to the education value of a knowledge of Greek and Roman classics. They get over the undeniable fact that we no longer employ those languages, as languages, by bringing forward a number of uses that never occurred to Erasmus, Cassubon or Milton. (p. 359)

There is another noteworthy dimension to the debate. It has a pulsating quality that seems to ensure that in almost every decade we are once again embroiled in proving that effective teachers need only (or much more than) a thorough knowledge of their subjects. In any given period, those who rally around the flag of high standards, failing grades for those who cannot compete, and rigorous testing for all, seem to be those who believe that only subject matter is needed for effective teaching—particularly secondary teaching. In 1893, the Committee of Ten reversed the traditional American commitment to mass education and announced that high schools should be reserved for

> that small portion of all the children in the country . . . who show themselves to be able to profit by an education prolonged to the eighteenth year and whose parents are able to support them while they are in school. (Committee, 1894, p. 51)

There is no question that this report, by also defining the content and units of a high school curriculum, became and remains the most important document in American secondary education. When it was issued in 1894, it set off harmonious resonances among all groups concerned with the low level pap they perceived being taught in the normal schools and teachers colleges of the day.

But then the pulsating, cyclical nature of this debate took hold and there was reversal of the popular wisdom. In the years prior to World War I, immigration continued unabated, as did the need to educate the masses for purposes other than college. The purposes of secondary education were significantly broadened. Given the more comprehensive goals, teachers were needed with the ability to offer more than the classics: business, home economics, all forms of vocations, and general studies were advocated to acculturate pupils into American society. Teachers were sought who could "relate to" the foreign born, pupils of varied cultures, and the poor and, at the same, maintain discipline and teach the basics. The goals of the school shifted from classical rigor to the creation of a melting pot. Obviously, the kinds of teachers and teacher education being demanded also shifted. The teachers colleges took on many of these broadened *responsibilities with* more "how to" courses—and those advocates left over from the previous Committee of Ten era subsided, temporarily.

The cyclical nature of the debate with "standards" in one period countered by diversity and opportunity for all in the subsequent era, has continued and intensified into more recent times. In the 1940s and 1950s the goals of greater access, expanded opportunities for the masses, and vocational training were dominant. This was a period of rapid growth in which many teachers colleges became state universities, and numerous new education doctoral programs were introduced into the leading universities. Many of those earning these new education doctorates became the faculties of the developing teachers colleges; they expanded the professional studies of these institutions by teaching the new specializations they had honed at the university. The philosophy that dominated public education was clearly one that required professionally educated teachers who knew more than academic subject matter. Consider how the following manifesto for the schools (developed by Kelley, 1947) supported an expanded teacher education:

1. Knowledge is not something that can be handed down on authority.
2. Subject matter taken on authority is not necessarily educative.
3. The best way to teach is not the setting out of subject matter in unassociated fragments.
4. Education is not preparatory to life; it is life itself.
5. Working out purposeless tasks will not necessarily produce good discipline.
6. The answer to a particular academic problem is less important than the process. (p. 14)

Even before the launch of Sputnik in 1957, the new cycle already was shaping a narrower school curriculum and demanding teachers with less (or no) professional education. In 1956, the Council for Basic Education promoted the following program:

1. Basic intellectual instruction must be the keystone of public education. The "hard" liberal curriculum emphasizing English, mathematics, science, history, and foreign languages must replace the purposeless "life adjustment" curriculum for all students, excluding those with clearly limited intelligence.
2. Students with high ability must be provided with greater opportunities to develop to their maximum capacities.
3. Standards must be developed to measure student achievement and to determine promotion to higher grades and classes.
4. Teachers must be more adequately prepared in the subjects that they teach.

5. When vocational training is offered, it must be duly subordinated to the primary function of the school: the development of intellectual discipline.
6. Those school administrators who resist pressures to include programs in the curriculum more properly belonging in the home or church must be supported. (Koerner, 1959, p. 372)

In 1959, Admiral Rickover (Rickover, 1960) observed that "the preparation of teachers in this country is notoriously inadequate as compared with programs for European teachers that provide liberal education for its teachers equal to that of our lawyers and other professionals" (p. 2).

In response to national demands for excellence and higher standards (and being beaten by the Russians), the 1950s and early 1960s were characterized by the burgeoning of intern programs in teacher education. The Ford Foundation actually had led the way by initiating the first intern program at the University of Arkansas in 1948 (in the preceding cycle). As it became clear that the dominant theme of the 1950s was to be a return to the basics and excellence, teacher educators were ready. Almost every major university launched a fifth-year program for liberal arts graduates, while the teachers colleges (now state universities) introduced a wide range of new majors in order to overcome their image as single mission institutions (i.e., teacher colleges). Harvard, Teachers College, Columbia, the University of Wisconsin, and Stanford once again led the way with the new (actually *renewed*) emphasis on liberal arts graduates who, with a summer of pedagogy, were paid modest stipends and placed in classrooms as teachers.

When the impact of the Great Society legislation began to be felt in the mid 1960s, the shift was once again back to serving the masses with a variety of programs that emphasized goals other than excellence, intellectual discipline, and preparation for college. Instead, Head Start, compensatory education, the Right-to-Read, expanded vocational programs, adult basic education, bilingual education, women's studies, and finally, the great thrust for equalizing education of the handicapped, all combined to broaden significantly the goals of elementary and secondary schools to their widest point in history. Practically anything that any organized constituency supported became ensconced as a legitimate responsibility of public education. And teacher education programs responded with an equally broad array of professional courses and direct experiences. In the previous cycle (i.e., 1950s and early 1960s), top-notch liberal arts graduates had been sought to upgrade the intellectual development of the most promising children and youth. In the Great Society period, the influence of which extended into the mid 1970s, large numbers of liberal arts graduates were also recruited, but now for Teacher Corps and for service in understaffed schools attempting to meet every goal imaginable—educational, social, health and well-being.

In effect, since 1893, the pressures on schools have been a seesaw between traditional calls for academic excellence and progressive demands for differentiated programs: those who believe in a common curriculum versus those who argue for differentiated goals.

Some analysts of the current era have already pegged the current period as the reaction to the programs aimed at equalizing educational opportunity. They read the current reports as the simplistic, traditional solutions of the past.

> Excellence in the reports is not defined but has come to mean higher standards, tougher academic requirements, reduction or the elimination of electives, more mathematics and science, more homework, longer school days and school years, better school discipline and management, and more testing. There is an assumption that poor quality of teaching is responsible for the crisis but excellence in teaching is not defined. (Passow, 1984, p. 3)

Teacher education has not shaped the alternatingly broad and narrow goals advocated for public education. It has, however, responded to the public's demands. Unfortunately, there is always a lag time, between "the demands" of the public and "the actions of teacher educators. Professional education usually finds itself still working on the reforms of a previous era (e.g., human relations training) when the schools are beginning, once again, to demand academic excellence. Indeed, right now, when the schools and teacher preparing institutions are just beginning to gear up to respond to "new" calls for excellence, the seeds for the next cycle are being sown. For example, there are increasing numbers of studies that show that, as a consequence of raising standards, the drop out rate is rising and something must be done; there is an increase in court cases of handicapped youngsters who did their best, but who are being denied high school diplomas; and there are renewed demands that something must be done, by schools, to ameliorate youth unemployment.

Summary

I have argued that demands for the reform of elementary and secondary education have shaped related demands for the reform of teacher education; that more academic subject matter has been the dominant emphasis of teacher education since its inception in 1823; that since 1893, the demands on elementary and secondary schools have followed a clear, cyclical pattern; that teacher education has responded to these alternating demands albeit with a lag time that overlaps the cycles; that the cycles may be characterized as advocating a common core for excellence on the one hand, and educating various constituencies toward different goals on the other; that the great universities, rather than fighting the normal schools, developed the research and theory that made teacher education a legitimate academic enterprise; that the liberal arts have been radically changed into liberal/general studies whose requirements reflect the knowledge explosion and faculty preferences, rather than eternal verities; that the proposal to use liberal arts graduates as teachers has been a constant theme and most popular in periods when demands for excellence dominate; and that the next cycle had already taken shape and is quite predictable. The sections which follow present several types of rationale for required teacher education: theory, logic, research, expert opinion, and common sense.

THE USE OF THEORY

What theory or theoretic constructs would justify the process of teacher education? How would such concepts support the contention that an individual who had completed a teacher education program would be more likely to do better than one who had not?

In sound programs of teacher education, students have a sequence of direct experiences: observation, short periods with small groups of varying ages, tutoring of individuals, student teaching for an extended period in the room of a master teacher, and finally, serving as an intern or beginning teacher with full responsibility but under regular supervision. In all of these experiences, there is a college supervisor or master teacher to provide regular feedback, to suggest the next level or skill to be practiced, and to confer with the neophyte on the meaning of the experience. In order for the beginning teacher to improve each year, rather than to have one year of experience repeated over and over, the actual experience of teaching must itself be a learning experience. As someone learning to teach, the intern or beginning teacher is subject to the same laws of learning as anyone else. Consider even a few principles of learning (Howey, Corrigan, and Haberman, 1979), as they might apply to an individual learning to teach:

1. Behaviors that are rewarded are more likely to recur.
2. Reward or reinforcement, to be most effective, must follow the desired behavior and be clearly connected with that behavior in the learner's mind.
3. Sheer repetition without feedback or reward is not educative.
4. Fear of failure has uncertain effects on learning and may cause repetition of ineffective responses.
5. Frustration, if too great, may cause anger and prevent behavior from being purposeful or rational.

Obviously, these are merely a few sample principles selected from a pool that is significantly larger. Is there still any debate that human learning is an established field of theory and research? Can there be any question that the intern or beginner is expected to use his teaching experience to learn to improve his teaching and is, therefore, in the position of a learner, subject to the principles by which all individuals learn? This being the case, consider the situation of a teacher education student in some direct experience with pupils under the guidance of a supervisor or master teacher. In such a situation the student teacher, and not the children or youth, is the primary learner, and the supervisor or master teacher uses the principles of learning to teach the neophyte to teach. By "primary learner" I refer to the fact that the program has been designed for the teacher education student and not for children or youth. As the primary learner, it is the student teacher's or intern's behavior that is rewarded, or connected with other desired behaviors. Through modeling behavior, or consultation, or cooperative planning of next steps, the supervisor also prevents fear of failure or frustration from interfering with learning. The student teacher or intern is never in a situation of sheer repetition without feedback. The process is essentially one of a tutorial supported by direct experience in which the neophyte has all the advantages of practice under supervision and all the benefits of being the primary learner. This situation continues up to the period of internship where, along with responsibility for children or youth, the beginner still receives supervision and continues his or her own development.

Contrast this situation with a college graduate who is given full responsibility to teach and has never had such direct experiences or supervision. The college graduate (suddenly teacher), can in no way be viewed as the primary learner by anyone who seeks to provide help. From the first day of school (which is also the first day on which the college graduate may begin to learn to teach), the pupils in the classroom are the primary learners and the college graduate must be professionally responsible and accountable for *their* learning and not his or her own. The extensive body of literature from which learning principles are derived cannot be applied to the unprepared individual simply placed into a teaching situation. Placing those without teacher education into teaching situations assumes that either there is nothing for them to learn about teaching, or that the unprepared college graduate will self-discover everything worth learning—with no ill effects to the teacher or the pupils.

Self-discovery is a very powerful means of learning: Whatever is learned by this method tends to be remembered. The problem with self-discovery is that it is also wasteful of effort, and it is time-consuming. Other problems with self-discovery include knowing what to try, having criteria for evaluating the outcomes of the trials, and being able to reconstruct exactly what one did that achieved the desired results—should any occur.

Unsupervised experiences for beginning teachers who have not had teacher education are unlikely to be educative because, focused as they must on the pupils, most neophytes never ask themselves, "What did /I/ learn about teaching today?" They immediately lock in on their pupils' *behavior as if their own personality, behavior, and intentions were irrelevant* to what is happening in the classroom. Experience is not the best teacher for people beginning to teach, particularly for those without previous direct experience or supervision. Experience provides the tests first and offers the learning afterward—if at all. Mark Twain once remarked that if a cat sits on a hot stove once it will never sit on a hot stove again—or on a cold stove, either. Unfortunately, overgeneralizing the wrong lessons from one's experiences is not a practice limited to cats. If we are not prepared with a conceptual scheme for understanding our experience, we will not reflect on and learn from that experience.

Thus far, we have discussed theoretic constructs from psychology that support the value of preservice and first-year teachers being worked with as individual learners. There are other theories and principles from sociology and organizational science that are also germane to the process of teacher education. These theories deal with explanations of human behavior based on how individuals function in groups in particular settings. The basic assumption of teacher education experiences (and coursework) is that future teachers need to learn (a) some fundamental concepts related to the role of a teacher, (b) how teachers are influenced by the groups in which they function, (c) the influence of administrative style on teachers, and (d) the impact of particular school settings and communities on the work of the teacher. To not prepare an individual teacher to recognize, participate in, and cope with the organizational and social realities of schools is to assume that these dimensions do not control or affect the teacher's work. Indeed, there are some who still believe that because the teacher can close the classroom door these influences and controls do not exist.

Social institutions (e.g., schools) have organic qualities, "lives of their own," that supercede and transcend the individuals who work in them. A substantial degree of individual behavior can be explained, not only by studying personalities, but by understanding the formal and informal roles and statuses that individuals occupy in particular social institutions. To understand and predict the behavior of teachers, the most fruitful unit of analysis may be the school and not the individual teachers in it.

At any given point in history, school settings reflect the larger society: the one-room school of the agrarian community had no bureaucracy, but it expected complete control over teachers' behavior; the tracking system in the comprehensive high schools that developed after World War I reflected the factory models of the period; the sprawling shopping-malltype schools after World War II reflected the varied constituencies of a consumerist society. The compensatory schools of the large urban areas with their emphasis on school spirit, reflect the societal value of providing equal opportunity to compete. The intellectual setting of some suburban and private schools reflects a commitment to academic excellence. Similarly, the creative environment of some fine arts and specialty schools reflects the values of their constituencies. The goal is not to make the future teacher a sociological researcher but to teach him or her some of the fundamental cultural influences that the school setting will be exerting on him or her. This dynamic gets even more specific as particular school settings are influenced by specific ethnic groups or communities in transition.

As important as these community settings and school cultures are, the impact of the particular building's teachers is an even more powerful influence on the neophyte. It might be helpful to briefly review some salient aspects of what the literature dealing with group norms tells us about the induction of beginners into work groups. Much psychological, sociological, and organizational science literature is germane to understanding the process of going through the professional laboratory experiences of a teacher education program.

What we know of worker induction into the work group is, in great measure, applicable to the process by which a new teacher becomes a "regular" one. Classroom teachers, while appearing to function as indenpendent practitioners, are actually integral members of significant groups—groups that may appear to be disorganized coffee and lunch cliques but which, in essence, exert substantial control over what is taught and how it is taught and on the teachers' perceptions of their students and the teachers' relations with parents.

The notion that teachers are "free," "unsupervised," or "independent practitioners" because they spend most of their time alone with students is simpleminded. Harrison (1976), in summarizing the literature on interaction in small groups, states:

> A reference group is any group that provides standards by which we can evaluate ourselves and adjust our behavior accordingly. . . . A very important aspect of a reference group is that it need not be present in order to exert an influence on individual behavior. . . . The common assumption is that if a person wants to belong to a group, that group constitutes a reference group for that person. (p. 405)

Can student teachers, or beginning teachers, or any individual teacher for that matter, *not* want to be an accepted member of the school faculty? This dynamic of group control is the best explanation we have for understanding the discrepancy between individual teacher behavior and group teacher behavior. Frequently, if we ask individual teachers if they will strike, they say "no"—but then they do. If we ask teachers whether they believe in standardized tests, they say "no"—but then they administer them. If we ask individual teachers whether they believe students should be free to go to the library, they say "yes"—but then they check hall passes. And, if we ask individual teachers whether they believe in individual differences they reply "yes"—but then they offer only group instruction.

The usual explanations for these discrepancies are that teachers will not say what they really believe—that there is cognitive dissonance and a gap between expressed attitudes and behavior. Another explanation is that authoritarian principles or unruly students prevent teachers from acting on their beliefs. The factor that is overlooked, however, is that there are group norms operating in the bureaucracy that impinge on teachers' behavior. From the prescribed arrival times for teachers in the morning, to the specific shelves upon which they store their lunches, to the way they greet their students, through to the assignments they make, the grades they give, the manner in which they look at, speak to, and listen to students, they are significantly affected by the group norms of the teacher groups in their schools. It is true that each of us belongs to many reference groups, but it is also true that our work groups play a significant role in our lives and a highly significant role in determining our working behavior.

In his classic experiment on having subjects participate in groups that were trying to match the length of lines, Asch placed subjects in eight-person groups where every other person was programmed to give the wrong answer (Asch, 1956). This false majority actually said shorter lines were longer. Asch's findings were that one-third of the subjects yielded to the pressure of the group and said they saw shorter lines as longer ones. The question was then raised: Are yielders merely conforming, or do they actually perceive differently when under group influence? A more frightening question that has not been studied is: If group pressure can change our perceptions of simple, unemotional, physical things held before our eyes, what distortions may these group pressures cause when unleashed upon vague, unseen concepts such as learner potential?

Darvis and Lofquist (1969) have described the fixed job model as a concept in which jobs are unchanging. The goal is to match the right person with the right job, and if there are difficulties, to blame the new person or the selection system. Kahn (1964) and others have theorized about an interpersonal role-making model where the beginner has an organizational role and receives feedback from others as he or she behaves. This conception assumes an incompleteness in the organization and accounts for some adjustment by both the organization and the individual. Regardless of the conception one chooses, and they both characterize some school situations, the group norms of classroom teachers make these models operative. In the fixed situation the student teacher or beginner will be more secure but less free; in the interpersonal conception the student teacher will be more personally involved but feel more tension. In either case, the norms of the teacher group will be of greatest significance in determining the student's role.

Graen (1976) has described the induction process of beginners in work situations as including three phases: initial confrontation, working through, and integrating. The initial confrontation stage is most interesting because it described a "disillusionment phenomenon" whereby high expectations before experience are followed by much lower expectations after experience. These less favorable expectations begin just prior to experience, deepen during the first year, and last approximately two and one-half years. This phenomenon has been so reliably documented that it is now expected that newcomers will be "turned off"—that they must inevitably go through such a stage—before they can be integrated into the work group. Many commentators on the research literature conclude that the most a training program or an induction process can do is to delay the full impact of disillusionment until the newcomer is prepared to cope with it.

Although it is clear that individuals in organizations are substantially dependent upon members of their work groups for gaining the knowledge and skills they need to perform their jobs adequately, little controlled research has been done to explain how this takes place in organizational settings. There are psychological theories of stimulus and response and sociological explanations of inherent needs for group approval and belonging, but little to explain the apparently universal drive of inductees to be part of a work group, or at the very least, to not incur its displeasure.

Studies on deviation, which seek to identify how much tolerance can be given newcomers, also have important implications for laboratory experiences in teacher education. Findings suggest that the freedom to deviate is fairly fragile, even for members who have paid their dues with long years of obedience. Pressures to conform to a particular group norm are greatest when group members are motivated to achieve uniformity, when the norm is of importance to the group, and when a member's deviant behavior is especially noticeable.

The present public emphasis on basic skills triggers these three conditions in teacher groups. It explains why a student teacher, for example, educated in principles of child development, will be steamrollered into the role of reading tutor by the operating norms of the particular teacher group. Pressures to conform are strongest when the norm is of high intensity and is highly crystalized. But this does not mean that there are not sufficient controls at all times. As long as a member needs or desires resources over which the group has control, as long as he seeks approval, and most important for teacher groups—so long as he or she seeks to not be criticized by the group, the member is likely to conform.

The issue is not one of placing students or beginners in schools where the teachers get along well together or where there is dissension. Janis' (1972) research suggests that high cohesiveness can in some cases be actively dysfunctional for the group as a whole. Janis suggests that as a group becomes excessively close knit and develops a feeling of "we-ness" it becomes susceptible to a pattern he calls "groupthink." The major symptom of "groupthink" is a marked decrease in the openness of the group members to discrepant or unsettling information. These interpersonal strategies, Janis argues, result in an increased liklihood that the group, in a spirit of goodwill and shared confidence, will develop and implement a course of action that is grossly inappropriate and ineffective. (This dynamic of "groupthink" may explain much of the behavior among university faculties as well.)

Unfortunately, what is "good" for the individual and what is "good" for the organization are often different, and sometimes mutually exclusive. This assertion becomes quite clear to anyone who compares the research and theory related to individual needs (whether physical, emotional, or cognitive) with the stated and real operation of any large complex bureaucracy. The individual's need for rest, or love, or the expression of new ideas must either be repressed or transformed into ways that are compatible with organizational norms.

Is it reasonable to believe that a teacher education student will be improved by gaining knowledge of how a community setting, or a school organization, or a teacher group, influences his teaching? Is it reasonable to believe that a student teacher or intern who has written papers or discussed these matters with other neophytes, supervisors, and faculty may be, to some degree, sensitive to these issues in future? In contrast, is it reasonable to assume that a liberal arts graduate placed in a classroom as a beginning teacher may never even have considered these matters, or if considered, may not have engaged in any systematic study of them? Finally, is it reasonable to believe that an untrained beginner will self-discover any reasons for deepening his sociological understandings of the school as a social institution—no matter how strongly these forces may be influencing his day-to-day work?

THE USE OF LOGIC

One of my answers to the question, "How do you know that teachers will be better if they have had teacher education?" is based on neither theory nor research but on thinking logically through some of the issues. Consider these questions: Why are many educational and political leaders prone to believe in the teaching competence of liberal studies graduates? Why is the model of teacher/scholar in higher education not useful for lower levels of schooling? Why is there objection to including pedagogic topics of obvious value in the university curriculum? Is the persistent demand to employ untrained personnel based on factors more powerful than theory, research, or logic, and is it likely to continue?

If some liberal studies graduates without professional training seem to teach as well as some teacher education graduates, has teacher education been shown to be useless or unnecessary? Why limit such comparisons to college graduates? Suppose schools could hire anyone? Might not some who had never been to college at all appear to perform as well (or better) than either liberal arts graduates or teacher education graduates?

If some people who have never studied business management (or who have never been to college at all) become richer and more powerful than the graduates of business schools, has the college training of business students been shown to be useless or undesirable? If some civilian boat owners do as well as some Annapolis graduates at commanding a ship, has the training of naval officers been shown to be inferior or useless?

Suppose we could place older adults—without college degrees, from almost any walk of life—into the roles of university presidents, vice presidents, and deans. Are we sure that we could discern which were the PhD's? If we could not necessarily discern a high school graduate from the holder of a doctorate functioning as the president of a great university, we might be less outraged when we fail to discern, after a few observations, the difference between two bachelors level people, one with training and one without, beginning to teach in a classroom.

Why is it considered reasonable to try to demonstrate that training effects cannot be readily discerned between a liberal studies and a teacher education graduate, but *unreasonable* to try to demonstrate that training cannot be discerned between a formally trained and a self-taught university administrator, corporate leader, or admiral?

There are many partial answers to this question. One such answer is that people in leadership positions (legislators, federal/state administrators, university officials, business leaders, foundation executives) tend to be college graduates who have advanced very far in their respective fields with liberal studies backgrounds and without special training for the specific roles they now occupy. Indeed, many of these leaders point with pride to the fact that they are on-the-job-trained: university presidents without a course in educational administration; corporate leaders without a course in business administration; government leaders without a course in public administration; union leaders without a course in labor law; foundation executives without a course in public philanthropy. Is it surprising, or wrong, for these individuals to attribute their successes to a sound liberal studies education? Would it be convincing to tell such people, "But think of how successful you might have become if you could function on the basis of research-based principles and techniques and not just on the basis of self-taught survival strategies?" My guess is that successful but untrained individuals are not prone to believe that they are actually less effective than they might be. A leader's willingness to reason egocentrically is related to his success: "If I did this well with a liberal studies background and on-the-job-training, then this is the best path for everyone."

In part, the willingness to utilize untrained graduates also reflects the belief that knowledge of subject matter is not only an essential requirement for teachers, but the only basis of everything a good teacher really needs. The reason this idea persists is that it (once again) reflects our own biases as college graduates. Reasoning egocentrically and reflecting upon our own experiences with college teachers, we ask a question that appears to be a reasonable one: "Why shouldn't high school and elementary teachers be made to meet the same high standards of (or to model) our university faculty—few of whom ever study methods of teaching, and all of whom are experts in their fields?"

The persistence of this "expert" assumption is worthy of some analysis. Following are twenty conditions of university teaching: The better the university and the more advanced the particular university course, the more likely these conditions are to be accurate descriptors. Consider each of these conditions in terms of how it would compare to the work of an elementary or secondary teacher.

1. College teachers frequently decide the actual number of students to be allowed to enroll in a particular class or section.
2. College students are not required by law to attend.
3. Absence and lateness are the student's responsibility.
4. There is seldom, if ever, a need for direct discipline or physical management of students by faculty. (Faculty are to call the campus police if there is a "serious" problem.)
5. Faculty control the hours of instruction; they may even extend or change the time of a class or cancel a class.
6. Faculty do not assume and are not held responsible for the motivation or interest of students in the subject matter.
7. Failure is the student's responsibility.
8. Evaluation methods and criteria for grading are the instructor's prerogative.
9. Curriculum, syllabi, and catalogue blurbs are subordinate to the instructor's choice of specific content (academic freedom).

10. Instructors are not required or expected to know anything about students. (The *less* they know, the more they are perceived as "fair.")
11. Faculty are not expected to compensate for language deficiencies, learning disabilities, or handicapping conditions.
12. Individual help or attention is a matter of faculty discretion.
13. Individual out-of-class or after-class help, or any personal conference, is at the discretion of the faculty.
14. Readings, assignments, and use of all learning materials are at the discretion of individual faculty.
15. All instructional methods used are at the discretion of the instructor.
16. Faculty need no supervision.
17. Little stamina is required for the teaching function (6–12 hours per week is a typical teaching load).
18. Teaching is an amenable, pleasant activity. Sitting, standing, drinking coffee (even smoking) are frequently permitted.
19. Individual faculty may select substitutes or guest lecturers. They may skip a class to go to a conference. They may assign an assistant to teach a class.
20. Individual faculty frequently determine what tests or experiences will exempt students from "their" courses.

There are easily another 20 conditions of college teaching that can be cited to support the contention that college instruction differs significantly from teaching on the elementary or secondary level. There is also substantial evidence that college students and faculty themselves do not believe that faculty members are necessarily effective teachers. But in order to dramatize the naivete of using college faculty as a model, I am willing to make the remarkable assumption that college teachers are all satisfactory teachers. Assuming that most college instruction is sound because it reflects the instructor's expertise, what would justify using the work of a college instructor as a basis for comparison with teachers in elementary and high schools? Is it reasonable to compare people who are locked-in as bureaucratic functionaries (i.e., teachers in schools) with university faculty whose role epitomizes the freedom to do what one pleases and get paid for it? Is it reasonable to compare an individual who must discipline, motivate, and bear responsibility for what students learn with an individual who can simply eschew such tedium?

Those who point to scholarship as everything a teacher really needs must deal with this issue: On what basis can the work of a scholar be compared with that of a teacher in elementary or secondary school? To those who are to any degree familiar with the day-to-day work demands of a classroom teacher, it is likely that there is no role further removed from the life of a scholar!

We also know that many universities value research and publication more than they value teaching; the better the university, the greater the emphasis on research and writing. Many great teachers never make tenure. How can such a situation be a model for advocating that elementary and secondary teaching would become respectable if it were more like university teaching?

But obviously, the personal predispositions of successful leaders, or the models of the college teacher/scholar are not the only reasons it has once again become popular to utilize liberal studies graduates as teachers. Another partial explanation for using untrained graduates to teach, but not to permit them to function in other professional roles—roles they could perform as well or better than many of the present incumbents—is that we do not believe that untrained teachers are a risk. Effective schools are not yet recognized as a life and death issue for many constituencies. If some untrained graduates prove to be not as able as others, it is viewed as an unfortunate occurrence, but not as a matter of the highest priority in the lives of children or youth. It is not a matter equal in importance to being hit by an unlicensed driver, or having a serious illness diagnosed incorrectly. Those who are prone to advocate the use of untrained teachers are not overly sensitive to the possibilities of any debilitating, long-term effects. The willingness to utilize untrained teachers reflects an assumption that teachers' potential impact (positive or negative) is not likely to have any important consequence for one's future life opportunities. This "willingness" persists even though there is mounting experiential evidence that the ability to engage in lifelong learning will, for many, be the difference between a productive, fulfilled life and a vacuous, unsuccessful one and that the experience of having had even a few effective teachers can be the critical difference.

Thus far we have cited the proclivity of leaders to reason egocentrically about job preparation, their commitment to the college teacher model, and their disbelief in teaching as a life and death occupation. There are other explanations for the widespread willingness to use untrained teachers: some of these are well intentioned, such as the need for more math/science teachers. Other explanations are less well intentioned, such as school superintendents who distribute emergency licenses to friends, relatives, and political supporters in much the same way as any political hack distributes patronage. There is also the pressure that comes from increasing numbers of liberal studies (and other) graduates who have not yet established their career lines or entered a graduate school and who simply need a job for a year or two.

The growing number of private schools is another source of influence. As more and more uncertified people actually teach, the need for professional preparation will inevitably be questioned by more people.

Professional educators feel threatened by these rationales and are puzzled about their inability to make others understand the obvious logic of their case. How can any reasonable objection be made to future teachers' learning something about discipline and class management? After all, public opinion polls constantly repeat the finding that this is the public's greatest concern (Gallup, 1984). Similarly, how can there be any reasonable objection to future teachers' knowing something about the nature of children and youth, or about how they learn?

There are two responses to these apparently reasonable demands from teacher educators. First, opponents of teacher education argue that the professional programs are so bad that these promises for delivering all the necessary pedagogic knowledge are not delivered upon; and second, that there is a limited number of courses that can be offered in any four-year curriculum, and that no matter what the rationale for more pedagogy, it will drive out even more necessary liberal studies. Some professional educators have labeled this the "living room" or "breathing space" problem and have proposed a fifth year for teacher education. While a fifth year is desirable, it will not solve the competition between pedagogy and liberal studies because the fifth year will inevitably be devoted to intern teaching and will have limited opportunity for additional coursework. The proponents of liberal studies contend that even if a fifth year were added, liberal studies, not pedagogy, should supplement any internship or full-time teaching. They point to the fewer number of academic courses taken by teachers (as compared to liberal studies graduates) and attribute the lack of excellence in current schools to a lack of academic subject matter in teacher education. Actually, in a recent summary of courses in academic and in professional areas, the Educational Testing Services (1982) notes that there has been a *decrease* in pedagogy coursework and an increase in arts and sciences courses.

When all the arguments "shake down," the overriding reason for using liberal studies graduates is not based on logic at all, and is only in part attributable to the foregoing contentions. The most important reason for using liberal studies graduates is *need*. Since 1800, when the Lancasterian method was adopted in New York City because one master teacher could teach 1,000 pupils by using monitors, there has been a persistent need for teachers in large urban areas. Lack of teacher education has never prevented large numbers of college graduates from temporarily "covering" classes as they pass through the profession. Prior to the beginning of school in September 1984, New York City, Chicago, and Los Angeles revealed varying needs for between 1,800 and 3,500 teachers. In some cases, whole states (e.g., New Jersey) implemented plans to meet their needs for teachers by using "unprepared" graduates. And the number of teachers needed will increase in the next couple years as many of these beginners resign. The science and math needs that have persisted throughout this century have simply overlain this endemic situation and will continue to exacerbate it.

The rationale of need is used by superintendents, state certification officers, and other professional educators just as frequently as it is used by those eschewing teacher education. The assumption is that anybody (literally, any body) is better than dividing a class among other teachers, using mediated instruction, using monitors, or having unsupervised study. I would hypothesize that if we examined the need for dental care among urban children and youth we would find as great an unmet need as we find for teachers. Our notion of professional standards, however, prevents us from using liberal studies graduates to provide these needed dental services, when, in truth, many of these graduates might do as well or better than some beginning dentists. There is also the feeling that we wouldn't want to injure children and youth in irreparable ways. The reasons we would not permit a college graduate to inject some novocain or fill a tooth (behaviors that are successfully performed by illiterates all over the world, every day), but would permit, even encourage, an untrained individual to become involved with a child's mental and intellectual development, are not always logical. An *operational definition* of a profession might, therefore, be stated as follows: *If need, even emergency need, is not generally accepted as sufficient justification for untrained, unlicensed individuals performing the services, then the services may be considered to be of a professional nature.*

THE USE OF RESEARCH

This section seeks to answer three questions: What evidence is there that teacher education makes any difference? Is there evidence for believing that skills taught in teacher education can affect the learning of children and youth? Do follow-up studies indicate any value of professional education?

A recent study by Cornett compares teachers with arts and science backgrounds and teachers with teacher education backgrounds in three southern states (Cornett, 1984). Because some of the general media have reported this study as proving that those with liberal studies backgrounds do better than those with professional preparation, it might be useful to discuss this report in some detail. The researcher does draw some conclusions that are worthy of reconsideration. Following is a brief analysis of the four parts of the Cornett study and an evaluation of its final discussion section.

The first of the four studies is based on a sample of 267 provisionally certified arts and science graduates teaching in Georgia who had passed the Georgia Certification Test. Only 18 were in their first year of teaching. The rest of the provisionally certified arts and science teachers (249) had been teaching one to three years. The test items reflect the curricula of the Georgia public schools and cannot be assumed to test the liberal studies or the professional studies knowledge of the subjects. The items were not drawn from some universe of knowledge that purportedly represents the university programs of either group. The fact that non-teacher education graduates scored slightly higher than teacher education graduates (at the bachelor's level) but lower than the teacher education graduates at the master's level, might be explained in numerous ways other than the fact that one group had a liberal studies college program and the other group had a professional program. Because the test measures knowledge of the Georgia schools' curriculum, it may well be a measure of the degree to which teachers with one to three years of teaching experience learn what is in the stated curriculum. The finding, therefore, that teacher education graduates score higher than liberal studies graduates in math and science should not convince anyone that teacher education graduates know more math and science than do other graduates. It may simply reflect that in the course of their teaching experience they have become more familiar with the Georgia curriculum. A similar interpretation might be placed on the finding that non-teacher education graduates scored higher in social studies or in humanities. Cornett states that "the test was designed to test minimum competencies and its content is no more complex than the content of the Georgia public schools" (1984, p. 21). It would have been just as logical to divide and compare the teachers on the basis of their family income, age, sex, IQ, or reading level, as it was to compare them on the basis of their college preparation.

The second part of the study compared two groups in Louisiana who had passed the National Teacher Examination—those with temporary and those with regular certification. It is important to note that "the population was composed of all teachers who received certificates to be employed in the state of Louisiana from July, 1982, to July, 1983; *all had met the minimum NTE scores necessary to be certified*" (Cornett, p. 23). In the group of temporarily certified teachers, average number of education courses taken was 9.5 hours overall and 13 hours for those taking the elementary education portion of the test. A random sample of 105 regularly certified teachers, who were graduates of teacher education programs, was drawn to serve as the comparison group.

The Weighted Common Examinations Test (WCET) that was used, assessed professional education, social studies, written English, science, and math. A comparison was made between composite scores for all teachers in the two groups and for teachers with no education hours. Temporarily certified teachers and teachers with no education courses scored higher in composite scores than did the regularly certified teachers. On the elementary education area of the test—a test of professional content—the regularly certified teachers scored higher. Cornett concludes that the reason temporarily certified teachers may have outscored regularly certified teachers on composite scores was that:

> General education or specialized content may make up for the lack of education courses (on a test weighted more heavily toward general education and specialized content), or possibly there were indeterminate differences among the groups. It is interesting to note that for the more specialized information (professional content) . . . the teachers who had not completed a teacher education program (an average of 13 hours of education) did not score as high as did those who had. (p. 27)

Again, it must be noted that this is not a comparison between liberal arts graduates and teacher education graduates. It compared temporarily certified teachers, who had already passed the NTE, with regularly certified ones. Its findings would *support* the contention that subjects who take more education courses will receive higher scores on professional content areas of tests.

The third part of the study reports a comparison of classroom performance by liberal studies graduates and teacher education graduates in a metropolitan school district in Georgia. The number of provisionally certificated subjects was 21; 18 were secondary teachers, 11 of whom were in their first year. The group averaged 2.3 years of experience. The comparison group included 27 subjects; 13 secondary and 14 elementary with an average of 7.3 years of experience. A second sample of 21 teachers with 5.2 years of experience was also drawn.

Both samples of teachers with regular certificates scored higher in performance than those with provisional certificates. In fact, most of the regularly certified teachers received perfect or near perfect scores on their competencies, while the scores of those with provisional certificates were widely distributed. The dispassionate researcher comments that "the principals may tend to rate an experienced teacher high on all categories because of other factors" (p. 32).

The fourth part of the study compared test scores and performance between provisionally and regularly certified teachers in North Carolina. Those with provisional certificates (N = 191) were employed at some point in a five-year period and included 31 with less than a bachelor's degree. A random sample of 348 regularly certified teachers was drawn as a comparison group. The North Carolina Department of Instruction requested on-the-job evaluations of these 539 teachers. Of that number, 292 were returned. The return rate for the provisionals was 59 per cent and, for the regular teachers, 51 per cent. In addition, NTE scores were used, although some teachers' scores were not available.

Findings indicated that the mean scores for all performance evaluations of all teachers did not differ for the two groups. Years of experience did not seem to matter, and almost half of the teachers were evaluated at the highest levels. Less than 3 per cent scored in the lowest range. Cornett concludes: "The results call into question whether or not these instruments are discriminating enough to reveal real differences that might occur between teachers, regardless of how they were prepared" (p. 41).

Regarding the written examination, the researcher concludes that the "arts and science graduates outscore the teacher education group to a slight degree; (but) the scores should be interpreted as roughly equivalent" (p. 41).

In the Discussion Section of these four related studies, the researcher makes the following points:

> Graduates of arts and science programs who had provisional or temporary certification generally outscored teacher education graduates in tests of general knowledge and professional education . . . (i.e., where 40 per cent of the score was weighted for professional education content.)
>
> The Georgia data revealed a greater difference by level (bachelors, masters) than by the type of degree, although at the masters level, teacher education graduates outscored arts and science graduates.
>
> Teacher education graduates in elementary education outscored those who were provisionally certified in Louisiana.
>
> The differences for the elementary and secondary fields may indicate similarities in terms of content focus at the secondary level for both teacher education and for arts and science graduates.
>
> The data from these studies indicate few differences in on-the-job performance.
>
> The data from Georgia Metropolitan district do indicate that teachers who are regularly certified receive a better rating than those provisionally certified.
>
> The North Carolina data revealed no real differences.
>
> Evaluation instruments have not been validated against student learning. (Cornett, pp. 45–47)

These are surely different points from those in the popular press.

After reading this report, a colleague of mine wrote the following reaction.

> We first have to establish that we have comparable samples. We know that socio-economic status levels influence performance on standardized tests. The best estimate is that SES accounts for 25% of the variance. So, if we were to compare education students with liberal arts students, have we controlled for SES? If we compare certified teachers with people who enter

> teaching without certification, have we controlled for SES? I ask this not only about SES, of course, but sex, race, and previous achievement records. The Southern Regional Education Board report does not once describe the samples it is comparing. There are so many (possible) "explanations" for the differences or lack of differences in the findings—that the data themselves are almost dangerous. . . . I worry about contributing to a data base without providing descriptions of the samples and without delineating how the samples were selected. (Raths, 1984a).

My interpretation of what the research really found out might include the following:

1. A test of school curriculum content is not a test of the content in either an arts and science curriculum or a teacher education program. It tests who has learned the school curriculum.
2. Arts and science graduates who: 1) self-select to enter teaching; 2) who are able to pass (minimum) state tests of certification; 3) who actually teach for a few years; 4) who have inevitably received some on-the-job supervision and help from administrators and other teachers, will begin to look (and test) more and more like regularly prepared teachers.
3. If you have the state department of instruction write to a principal or a superintendent who has hired a liberal arts graduate, asking for an evaluation of that teacher, he will either not respond or will send back a laudatory evaluation in order to protect his decision.

Finally, many teacher educators claim that a fifth year program is the best way to prepare teachers. These programs involve allowing liberal arts graduates with good academic backgrounds who self-select themselves to begin as regular teachers and to simultaneously take a few professional courses. There must also be provision for regular on-the-job supervision. I have a very strong suspicion that this type of person, who many believe makes the the best teacher, is represented quite heavily in the Cornett studies. Instead of labeling them "fifth-year teacher education students," however, they are designated "liberal arts graduates" because they are in diverse schools and colleges and not in one, identifiable program. While I cannot know the exact number of these individuals, neither does Cornett. Based on the study report itself, I would estimate that almost all of the Cornett's "liberal arts" teachers have taken or are taking some education courses each year, and that they are receiving regular supervision. I would call these persons "interns."

It may well be that, in future studies, liberal arts graduates can score higher than education graduates on written and performance tests, but to conclude that, we would need samples of new graduates from both groups, who are matched and who are "uncontaminated" by on-the-job experience, help, or concurrent professional coursework. There is no question in my mind that, in the future, there will be well done studies that do show that some liberal arts graduates, prior to any teaching experience or coursework at all, do better in practice and score higher on state examinations than do some teachers with professional education and experience. No present study has done this.

> One explanation for this dilemma is that so many of the important teaching skills, or dispositions, are not those associated with teaching per se, but are those associated with being thoughtful, being kind, being sensitive, being well-read, and being energetic. . . . We could write an examination for teachers that tested arcane knowledge, but such items would be ridiculed both by the public and by our colleagues (and us) as being irrelevant and, in effect, dishonest. (Raths, 1984b)

Thus far, what evidence there is generally supports the contention that teacher education does make a positive difference (see, for example, Evertson, Hawley, and Zlotnik, 1985). Studies which compare on-the-job performance of regularly prepared teachers and those with little or no teacher education clearly favor those who have completed a teacher education program. Two exceptions are a study in which lay persons (e.g., an electrician) taught a unit lasting a few hours to high school students, who then scored higher (but not significantly higher) than students taught by regular teachers (Popham, 1971). Another study reported that students taught by student teachers (who had had education courses but who were inexperienced in teaching) taught pupils more than did experienced teachers (Bausell and Moody, 1973).

In New York State, principals using a rating scale found that provisionally certified teachers did less well than regularly certified ones (LuPone, 1961). In Florida, first-year teachers who had completed teacher education coursework were rated higher than those who had not by educators and lay persons (Beery, 1962). Another Florida study supported the contention that more positive reports from principals (and higher MTAI scores) increased directly with the extent of teacher education (Gray, 1962). Again in Florida, a study of first-year elementary teachers found that pupil achievement gains were significantly related to hours of education courses (Hall, 1964). In another evaluation using administrators' evaluations in Florida, professionally certified secondary teachers were rated higher in teaching skills than those who were provisionally certified (Gerlock, 1964). In a longitudinal study in Georgia, regularly certified teachers were rated higher than those who were provisionally certified, on the basis of self-reports, pupil perceptions, and actual classroom performance (Bledsoe, Cox, Burnham, 1967). Using MTAI scores, intern certified teachers scored higher than those who were provisionally certified (Mette, 1971). In a study of beginning teachers, principals rated arts and science and professional graduates no differently in knowledge of subject matter, personal characteristics, or planning, but rated teacher education graduates higher in communication skills and consideration of pupils (Copley, 1975).

On the basis of research available, I would say there is some systematically collected data to support the contention that teachers who have been professionally prepared perform in ways that are rated higher by principals, lay persons, and children and youth. There is little data that connects teacher preparation with pupils' achievement scores.

To keep dealing with this question of whether liberal studies graduates teach as well as teacher education graduates may be a fruitless pursuit, unless the goal is to convince the individual who holds the most extreme position—that liberal studies is all that is necessary. The more fruitful research questions relate to how much teacher education, for whom, and under what conditions? The essential research support for some form of teacher education does not come from the studies comparing various graduates. It is based on the following syllogism: teacher education programs teach selected skills; student teachers can learn these skills; these skills correlate with pupil learning outcomes.

The research evidence supporting the current knowledge base is one place to begin. There are numerous summaries of "the effectiveness literature" which seek to specify teacher actions that can be directly connected to pupil learning. Leading researchers now believe that a substantial knowledge base has been established regarding several critical dimensions of teaching: active learning (also referred to as direct instruction), classroom management, and teacher expectations (see, for example, Good, 1981; Peterson and Walberg, 1979). There is substantial and increasing evidence that pupil achievement can be related to specific teacher behaviors in each of these three realms.

While teacher educators have always taught specific behaviors and skills to neophytes (even at the risk of being denigrated as mere "how-to" pedagogues), they did not have the assurance they now enjoy that specific teaching skills are indeed related to particular pupil learnings.

A related trend has developed simultaneously among teacher educators who have become more systematic in ascertaining that their university-based instruction has some effect on the behavior of their students. In analyzing why some teacher education programs fail, Borg (1970) proposed four reasons: emphasis is on telling, rather than on doing; instruction is general, rather than specific; effective models are not provided; effective feedback is not provided. Based on these contentions, microteaching was developed as an alternative approach to teacher education. Active student practice and demonstrated competence of specific skills were proposed as substitutes for some of the traditionally structured coursework.

While not every teacher education program used micro teaching as such, it was a symptom of this trend to emphasize specific skills with future teachers. The advent of the inexpensive video camera facilitated the use of video recording in university simulation laboratories as well as in real classrooms.

As Research Editor, Reviewer, and Editor of the *Journal of Teacher Education* between 1968 and 1984, I would estimate that at least 20 articles were submitted for review each year that followed a pattern of demonstrating that specific bits of teaching behavior could be taught. A group of teacher education students would be evaluated at the beginning of a course or program as not having "X" skill. The professor (who was also the writer of the article) would then teach the particular skill or objective to the students. Results inevitably indicated that the students who were taught the skill or objective learned it. In some cases there was a comparison with others not taught the skill, but in most cases the comparison was to the students themselves. While I rarely advised acceptance of such "research" for publication, I have no question that teacher educators can successfully teach their students a range of effective instructional skills.

The real research basis of teacher education, therefore, has little to do with comparing liberal arts and teacher education graduates. It has much more to do with identifying basic teaching skills which are related to the learning of children and youth, and then with demonstrating that these skills can be taught to teachers. The assumption may then be made that those who complete professional programs and have learned these skills have a choice; they may use these skills in their subsequent teaching practice or they may not. Those who have not learned these specific skills do not have such a choice because the majority of these skills are neither the result of common sense nor amenable to self discovery.

An additional piece of the research argument in support of teacher education deals with follow-up studies. Almost every accredited teacher education program follows up some of its graduates who are teaching and secures their evaluation of their preparation. These follow-up studies commonly show great consensus: Teachers in practice feel they should have had more direct experience, more preparation for working with handicapped students, and more specific preparation for a range of day-to-day problems. Practicing graduates rarely request either more basic knowledge in professional education areas (e.g., more learning theory) or more liberal studies (Haberman, 1974; de Voss, 1981). Critics of this follow-up literature may, of course, point out that this may be precisely what is wrong with present schools (i.e., too much teacher concern with low level, practical issues and not enough focus on subject matter). The possibility does exist, however, that the teachers' perceptions are valid; that they have had enough academic subject matter but not sufficient teaching skills to let them use this knowledge.

As more urban areas and whole states use increasing numbers of uncertified teachers, there will be increasing opportunities to continue this research. It should be required of all these efforts that beginning teachers' performance and the on-the-job training that is offered be systematically evaluated. These should not simply provide comparison studies among beginners but should help us to evaluate the variety of teacher education efforts.

THE USE OF EXPERT OPINION

In comparing the position of those who advocate with those who eschew teacher education, it is possible to compare teacher education programs as they should be offered with liberal studies programs as they are actually offered. The converse is also possible—to compare the knowledge gained by graduates of liberal studies as such programs *should be* offered with teacher education programs as they are *actually* offered. The discussion that follows assumes the best; that both types of programs are successful and that graduates are realizing the learning objectives that were intended in their respective curricula.

The following statement, written in 1885, argues that there can be no reasonable expectation that an individual in the role of university student can ever be prepared for guiding the learning of others unless he "consciously reflects" upon what is happening to him.

> There can be no doubt that the teacher should have an accurate knowledge of the subject he professes to teach, and especially for this, if for no other reason—that as his proper function is to guide the process by which his pupil is to learn, it will be of the greatest advantage to him as a guide to have gone himself through the process of learning. But, then, it is very possible that although his experience has been real and personal, it may not have been conscious—that is, that he may have been too much absorbed in the process itself to take account of the natural laws of its operation. This conscious knowledge of the method by which the mind gains ideas is, in fact, a branch of Psychology, and he may not have studied that science. Nor was it necessary for his purpose, as a learner, that he should study it. But the conditions are quite altered when he becomes a teacher. He now assumes direction for a process that is essentially not his but the learner's; for it is obvious that he can no more think for the pupil than he can eat or sleep for him. His efficient direction then, will mainly depend on his thoughtful conscious knowledge of all the conditions of the problem which he has to solve. That problem consists in getting his pupil to learn, and it is evident that he may know his subject, without knowing the best means of making his pupil know it too, which is the assumed end of all his teaching; in other words, he may be adept in his subject, but be a novice in the art of teaching it. Natural tact and insight may, in many cases, rapidly suggest that knowing a subject is a very different thing from knowing how to teach it. This conclusion is

> indeed involved in the very conception of an art of teaching, an art which has principles, laws, and processes peculiar to itself. (Payne, 1885, p. 112)

Advocacies such as these were powerful forces for change. Higher education then spent the next 75 years developing the fields of psychology and educational psychology. By 1961, almost every practicing teacher had studied theories and principles of learning, as well as having observed and practiced them. The arguments seem to have reversed themselves. Now the problem of knowing academic subject matter well enough was advocated by a leading psychologist as the best way to lead pupils to intuitive (higher) forms of learning.

> The warm praise that scientists lavish on those of their colleagues who earn the label intuitive is major evidence that intuition is a valuable commodity in science and one we should endeavor to foster in our students. The case for intuition in the arts and social science is just as strong. But the pedagogic problems in fostering such a gift are severe. . . . It requires a sensitive teacher to distinguish an intuitive mistake—an interestingly wrong leap—from a stupid or ignorant mistake, and it requires a teacher who can give approval and correction simultaneously to the intuitive student. To know a subject so thoroughly that he can go easily beyond the textbook is a great deal to ask of a high school teacher. Indeed, it may happen occasionally that a student is not only more intelligent than his teacher but better informed, and develops intuitive ways of approaching problems that he cannot explain and that the teacher is simply unable to follow or recreate for himself. It is impossible for the teacher properly to reward or correct such students, and it may very well be that it is precisely our more gifted students who suffer such unrewarded effort. So along with any program for developing methods of cultivating and measuring the occurrence of intuitive thinking, there must be some practical consideration of the classroom problems and the limitations on our capacity for encouraging such skills in our students. (Bruner, 1961, p. 68)

It is clear that individuals who qualify as "experts" have taken both sides of the issue on employing as teachers college graduates who have not had teacher preparation. It is also clear that individuals from both groups who have seriously and honestly considered the problems of making teachers more effective, inevitably move closer together.

After the passage of the Professional Development Act of 1967, and after infusing schools of education with enormous amounts of federal funds, the U.S. Office of Education declared 1970 "The Year of the Liberal Arts." A conference, then a volume, was produced that was intended to, once and for all, lay out all the issues of the confrontation between academics and educationists and resolve them (Bigelow, 1971). In print, however, the liberal arts professors sang a paean to the new forms of liberal studies that were being developed to provide greater life meaning to students who had become more socially conscious. The teacher educators, for their part, called for greater integration between and among liberal studies, professional studies, and school practice, as the means of addressing the new social realities. How surprised (disappointed?) both groups might be to see their successors (in 1984) still rearguing these same issues but coming to a different conclusion: that only the other side's bailiwick is in need of a drastic overhaul.

In reconsidering this long-standing debate, a few individuals have made contributions that have satisfied both the academics and the professional educators. The nature of their contribution has been such that the academics could rightly claim that well taught liberal studies courses would teach students these universal principles, while professional educators could argue that a sound teacher education might also teach those same things. Louis Raths' "Modes of Thinking" is one such contribution (Raths, 1961). The ten modes described in terms of children's thinking are: comparing, summarizing, observing, classifying, criticizing, problem solving, analyzing, imagining, planning, and interpreting data. Both sides see their particular curricula as preparing students who have learned these modes of thought, who can recognize them in others, and who can foster them.

More recently, researchers have developed exhaustive lists of behaviors that are intended to guide universities in assessing their students' skills—students in all schools and colleges. While referring to these skills as "interpersonal," they appear to be very much like pedagogic functions: mentoring, managing, leading, negotiating, supervising, instructing, consulting, entertaining, and persuading (see Breen, Donlon, and Whiteker, 1975, p. 101–103). Under these nine categories, 102 specific skills are listed. For example, under mentoring is "asks questions"; under managing is "sets goals and performance standards"; under leading is "motivates"; under negotiating is "reconciles opposing viewpoints"; under supervising is "assigns tasks"; under instructing is "uses demonstration and role playing to teach subject matter"; under consulting is "gives information and ideas based on experience and training"; under entertaining is "gives support and assurance"; and under persuading is "describes and explains advantages of a program" (see Breen et al., p. 103).

There can be no question that these specifications will serve as precursors for developing a standardized test for liberal arts graduates in order to evaluate the efficacy of liberal studies programs. All 102 "interpersonal skills" cannot be listed here, but it should be clear from the nine examples cited above that the goals of many liberal studies are, in effect, becoming very much like the behavioral objectives or competencies of many teacher education programs.

It may very well be the case that a substantial and growing portion of subject matter that was developed as "professional" is now also found in the liberal studies curriculum and vice versa. This is not a criticism: It is clear to me that many skills of teaching are superb tools for interpersonal relations, parenting, and communicating.

In many universities the decision of which college, or curriculum, a course is to be offered in may be explained by institutional history or politics rather than by any systematic planning for the clear division of subject matters. Child development (or child psychology, or child study) can be found in several colleges within most universities—similarly with adolescent development. Sociology courses in general/liberal studies frequently deal with much of the same content as multicultural or human relations courses in education. Linguistic courses in liberal studies frequently deal with much of the same content as language arts courses in education. This kind of overlap is also not unheard of in testing and mental assessment, the everyday uses of computers, or in research methods. In areas such as history and philosophy, there is a clear overlap in much of the content offered to liberal studies students and to education students.

One conclusion that might be drawn is that this overlap is undesirable (i.e., an inefficient way to run a university). Another conclusion might be that much of what was formerly regarded as professional subject matter has become so widely accepted that it is generic; every educated person, in effect, needs to know something about mentoring, managing, leading, negotiating, supervising, instructing, consulting, entertaining, and persuading (provided we label them interpersonal skills, not pedagogy). If there continues to be an increase and drawing together (overlap) of liberal and professional studies, there should be no reason to expect marked differences between the scores of many liberal studies graduates and their professional counterparts on tests of teacher competencies.

Summary

Future teachers need more than learning about psychological principles of learning or other content areas that have come to be accepted as fundamental to pedagogy. The role of college student, whether in liberal studies or professional programs, requires students to consciously reflect upon the process of learning as they go through it. It is this awareness of knowing how they have learned that is the basis of their ability to guide the learning of others.

Many of those experts whose scholarship now forms the basis for pedagogic study have come to recognize the great teaching potential of graduates with strong subject matter expertise—particularly in the teaching of higher cognitive skills to all pupils and in the teaching of the gifted.

The trend to increased evaluation of liberal studies programs has led to greater objectivity in the way many college programs state their goals and objectives for students. What seems to be revealed by this trend is that many liberal studies objectives are almost the same as professional studies objectives—with different nomenclature. It may well be the case that many liberal studies students are now inadvertently preparing for teacher competency exams by the study of pedagogic skills and knowledge under different labels.

THE USE OF EXPERIENCE

Experiential evidence is usually regarded as having less power than research (systematically collected data), theory, or expert opinion. ("Power" refers to the ability of a particular form of knowledge to explain present behavior and to predict future behavior.) In teaching, however, it may very well be the case that the experiential wisdom of teachers and teacher educators frequently provides what are perceived as *powerful* answers to the difficult questions associated with classroom practice.

The problem with experiential knowledge in settling controversies (e.g., liberal arts graduates can teach as well as those with professional preparation) is that experience has the greatest impact on the individuals who have had it and does not seem to transfer easily to others who are experience-free. For example, a master classroom teacher with 25 years of experience as a cooperating teacher may state, "I've seen dozens of bright, highly academic new students/interns who show up for their first day of teaching and are simply lost . . . they don't even know where to begin." Such a statement is likely to have little impact on those political or educational leaders who begin from the premise that academic excellence in liberal arts is the basis for everything one needs to know about teaching: such leaders might raise questions related to the master teacher's own academic background before relying on his or her judgment regarding the behavior of students or interns. A second problem is that some individuals have consciously reflected upon their experiences while others have simply lived through them.

The ultimate criterion for evaluating knowledge based on experience comes down to evaluating the quality, judgment, and wisdom of the individual(s) whose experience is being utilized. In those cases where experience is accepted as valuable, it is an acceptance of the individual's expertise as much as his experience. To be perceived as valuable, experience must come from one perceived to be a connoisseur. Many teacher educators have been recognized as connoisseurs regarding the processes involved in preparing others to teach; few school supervisors or master teachers are recognized as connoisseurs of these processes. It is hoped that the contentions that follow are those of a recognized connoisseur who has integrated and reflected upon the experiences of those who are less recognized.

In 1964–65, while serving on a task force of a Ford Foundation Great Cities Urban Teacher Education Project, I was also directing and studying various intern and fifth-year programs for inducting liberal arts graduates into teaching. Much of this work was devoted to specifying the nature of the professional preparation that could be given to liberal arts graduates in a summer session and then have them begin to function effectively in classrooms in the fall. A second question we dealt with was, "How much and what kind of supervisory help should these beginners be given?" A third question, "What kind of university courses should liberal arts interns take in future?" Then, as now, "need" required that thousands of liberal arts graduates be used as teachers in urban areas all over America. There were three conditions, however, that distinguished our situation then from the present condition. First, there was an increasing need for teachers, and most well prepared, fully certified teacher education graduates were self-selecting to work in other than urban school systems. Second, expanding schools of education and the fledgling teachers' unions were not overly concerned about fifth-year programs. Third, our liberal arts graduates, while paid as beginning teachers, were part of a university fifth-year program and not hired by school districts or the state as unaffiliated individuals.

In spite of fifth-year efforts nationally, these programs did not produce the numbers of teachers needed in urban schools. Teacher Corps., which was based on our Wisconsin model, also did not provide the numbers needed.

As part of our Great Cities work, we met regularly in Chicago to discuss how to increase the numbers of liberal arts graduates in teaching. Evelyn Carlson, then Associate Superintendent of the Chicago Public Schools, reported to us that between September 1964, and January 1965, approximately 1,000 liberal arts graduates were hired as Emergency Teachers and placed into Chicago classrooms. By the end of the school year (June, 1965), there were approximately 165 of these unprepared graduates still in the classroom. No follow-up data were kept on what ultimately happened to these individuals. There is no reason to believe that Chicago and other urban areas have not been following similar hiring practices for the last 20 years.

These were not experiments or demonstrations to be shared publicly. At the time, with the growth of the Civil Rights Movement, the school officials were understandably chary: They did not want to be accused of experimenting or giving second best to minority children and youth. Today, similar practices might be written up by the media as: "A forward-looking school system implements the national demand for excellence."

In effect, simply putting graduates out to teach without making them part of a fifth-year or other continuing education program uses the children and youth as screening devices. Unfortunately, on-the-job screening does not weed out those lacking in potential and leave in those who will then become good teachers. On the basis of 25 years of experience with intern programs in several states, I would hypothesize that the majority of the 165 who weathered 1964–65 in Chicago (and those who "stick it out" without regular supervision, coursework, or training everywhere else) are the "strong insensitives." This characterization is derived from a psychological profile developed to assess trainees in communication tasks (Hunt, 1965).

We found early, and have corroborated the experience repeatedly in a variety of urban settings, that the personal dimensions of strength and sensitivity could predict which interns would be effective and which ones would stay on in spite of their lack of effectiveness. In sharing experiences with other teacher educators trying to help beginners in urban schools at that time, we found they were having similar experiences. The description of these two predictive personal dimensions (see Fantini and Weinstein, 1968) are as follows:

1. Strong-sensitive: This person can maintain a consistent, orderly structure in which learners can operate, and at the same time indicate that he is constantly aware of what is going on with the pupils. The pupils are treated as important and respected persons with feelings, attitudes, and experiences that are worthy of attention.
2. Strong-insensitive: This person can keep a class in order and maintain his authority, but he never can really see, hear, or experience the pupils. It is pretty much a case of him against the pupils, and the stronger will win.
3. Weak-sensitive: This person holds the interests and needs of the child foremost in mind, but is unable to establish the degree of order which will allow him to capitalize on his sensitivity.
4. Weak-insensitive: This person is unaware of what is happening and couldn't do anything about it if he were.

Subsequent research has substantiated our view of the strong-sensitive as a teacher with "with-it-ness" and skills of overlapping (Good, 1981, p. 3).

With programs in which there was little or no supervision, or where the related coursework was insufficient, it was the strong-sensitives and weak-sensitives who quit, the weak-insensitives who were eased out, and the strong-insensitives who remained. In effect, my experiences have revealed that simply hiring liberal studies graduates and putting them out as teachers will be an effective means of using the situation itself as a screening device for recruiting and retaining people who can control urban classrooms, but who may not be able to relate positively to urban youth.

The current emphasis on improving the conditions of work are most germane here. While increased salaries are a vital need, they will not solve this total problem. The strong-sensitives who are needed to remain in teaching want, above all, to see their pupils learn: They are concerned about all the conditions of work in the school environment that impede or facilitate teaching and learning. These conditions are well known and have been carefully documented in the effective schools literature (Raiche, 1984). This conclusion is based on my experience with liberal arts graduates having the academic backgrounds to enter graduate schools in several of our leading universities (Columbia, Rutgers, Wisconsin).

THE USE OF COMMON SENSE

One set of answers generated by the question, "How do you know that teacher education is necessary?" can be characterized as common sense responses. The problem, of course, is that while there is much experience and expert opinion to support some of these contentions, other common sense solutions are refuted by experience and research.

One common sense fallacy is that teachers who have a strong knowledge base in a discipline and little background in the principles of learning and instruction can effectively teach *all* youngsters in normal classes. In former times, there were few pupils with handicapping conditions attending schools. Today, there is an ever-growing number of students with "special" needs. In some school districts, more than half of the pupils are disadvantaged (as defined by Title I.); handicapped in some way (as defined by Public law 94.142); bilingual or unable to understand English; learning disabled (this catch-all category is being markedly expanded); or members of a minority, ethnic, or religious group with special curriculum needs. The concept of mainstreaming takes on a humorous quality when only a small minority of pupils in some classes, schools, or districts is defined as "normal." In these cases, "normal" does not mean either desirable or typical. It simply refers to those pupils left over—those who do not meet some designation by the state or federal government as needing special instruction.

What is the rationale for placing a liberal studies graduate with any one of these constituencies? How has gaining a solid background in some academic discipline prepared one to teach non-English speakers, or the deaf, or the autistic, or the illiterate, or the brain damaged, or the emotionally disturbed? Is it really necessary to design a controlled study comparing liberal studies graduates teaching retarded and disturbed pupils with teachers who have been prepared to reach such students? Perhaps we can accept the reality that there are large (and growing) constituencies of pupils who, because of physical, emotional, economic, or cultural reasons, do not show up in school every morning prepared or able to learn. We must recognize that there are special ways of working with such constituencies which require specific training and education.

Another common sense fallacy grows out of the cumulated experiences of neophytes functioning in school bureaucracies. The most overworked word in the lexicon of the inexperienced intern or beginner placed into the role of teacher is "incredible." It is literally beyond the belief and comprehension of many of these beginners (who naively expect a bureaucracy to be operated by logic and reason), that there are so many obstacles to their simply teaching. They perceive the large number of classroom interruptions as "incredible." The uncared for way in which some of the youngsters come to school is "incredible." The lack of time devoted to actual teaching is "incredible." The attitudes of the principal, or some of the teachers, or the parents, (or all three) is "incredible." The limited materials, books, media, or equipment available is "incredible." And most of all, the lack of knowledge and skills pupils have is "incredible."

In truth, if these liberal studies graduates were to not become teachers, but were to enter the armed forces, or were to begin work in a major corporation, or were to begin careers in government, their lack of professional training and experience would make their beginning experiences in any of these bureaucracies equally "incredible." Part of being inexperienced is the trauma of learning that all reality—but especially the reality of having to work in highly structured, organized, regulated bureaucracies—is inevitably a shock to every thoughtful person. There is a tacit assumption in the university, where knowledge is derived from rational sources, where every procedure or decision can be openly criticized, and where any appeal couched as an issue of fairness or equity can send tremors into the president's office, that the rest of the world should also be operated on rational, fair means. It is to the university's credit that it is probably the poorest place to be prepared for working in irrational, real-world bureaucracies. The exceptions to this generalization should be the professional courses. Social workers, nurses, business administrators, architects, lawyers, and teachers all have some specific preservice instruction and direct experience that prepares them for working in bureaucracies which will severely impinge on the ideal ways professions ought to be practiced. Liberal studies graduates, however, unless they happen upon a political science or sociology course devoted to the analysis of bureaucracies, are more likely to be fresh and unsuspecting as they graduate and enter the work force.

In the absence of valid, reliable knowledge regarding the nature of how individuals function in organizations, common sense is frequently wrong. We cannot assume that schools—which are complex, ritualistic, not necessarily rational bureaucracies, controlled by special traditions and peculiar histories, managed by idiosyncratic leaders and pummelled by a variety of uncontrolled external forces—can be understood (and managed) by simple reason.

> Complex systems differ from simple ones in being "counter intuitive," i.e., not behaving as one might expect them to. They are remarkably insensitive to changes in many system parameters, i.e., ultrastable. They stubbornly resist policy changes. They contain influential pressure points, often in unexpected places, which can alter system-steady states dramatically. They are able to compensate for externally applied efforts to correct them by reducing internal activity that corresponds to those efforts. They often react to a policy change in the long run in a way opposite to their reaction in the short run. Intuition and judgment generated by a lifetime of experience with the simple systems that surround one's every action create a network of expectations and perceptions that could hardly be better designed to mislead the unwary when he moves into the realm of complex systems. (Forrester, as quoted in Miller, 1972, p. 50)

Still another example of how common sense may mislead us is in the area of job satisfaction. Common sense tells us that people who are satisfied with their work produce more. Some 3,300 studies conducted between 1930 and 1976, however, lead to the conclusion that there is no direct effect of job satisfaction on productivity. If there is any relation at all, it is more likely to be from productivity to satisfaction; that is, that high productivity may lead to the attainment of important job values in a particular job setting. (Locke, 1976). Similarly, job satisfaction is not directly related to factors such as pay, working conditions, stress, and other factors. We are prone simply to assume we know their impact on individuals when, in truth, these factors are frequently strained through the bureaucracy and emerge with unpredicted or confounding impact.

If these findings from work situations are applicable to teachers in schools, it may mean that a teacher's need to be productive is of primary importance and that the conditions of work that facilitate or impede feelings of productivity might actually be causes, not effects, of job satisfaction. Also, the common solutions now being advocated (increased salaries, career ladders, improved professional development), which prove to be most fruitful, may be those that will more directly affect productivity rather than perceptions of job satisfaction. Workshops that teach teachers ways to cope with stress, therefore, may increase job satisfaction, but are not the primary solution. Not being able to teach productively may lead to teacher stress and lowered job satisfaction.

Recruiting more able individuals into teaching cannot begin with a focus solely on job productivity. Status and regard for teachers are also important conditions of work.

> It is difficult for public policy to manipulate cultural norms, such as status and regard, that might make teaching more attractive. The more manipulable incentives to enter teaching have to do with salary and structuring the quality of work life. Both involve money, but it is difficult to foresee a market response in which wages will increase salaries rapidly enough to attract those who have other market options. (Kerchner, 1984, p. 61)

Common sense then, is a bad test for evaluating many of the solutions currently being proposed. Higher salaries, more respect, fewer interruptions, more supportive service, few extraneous non-teaching duties, more planning time, and opportunities for continuing education and career development, are likely to have a salutary effect on teacher effectiveness (Corrigan, 1981). The great challenge, however, will be to apply any of these obvious improvements to the school bureaucracy and have them not be transformed into an opposite effect. It has been demonstrated in many universities, for example, that given substantial amounts of merit salary funds, the bureaucracy can create procedures for raising salaries that will have the effect of decreasing productivity and lowering job satisfaction. This is not to argue against increased salaries, but to emphasize that common sense solutions will not simply strain through a bureaucracy; complex school organizations must be carefully worked with in the planning and execution of these solutions.

As important as teacher education is for preparing beginners to work with learners who have special needs and to help the neophyte with the vicissitudes of a bewildering bureaucracy, there is an even more important reason why the unprepared should be prevented from teaching: The practice of common sense pedagogy quite frequently leads to behaviors that are not simply poor teaching, but that turn children and youth off to learning. Following are just a few behavioral examples of what beginners without preparation are likely to do when they operate on the basis of common sense.

A well educated, well-intentioned adult's common sense teaching behaviors are frequently a most ineffective, counterproductive pedagogy. Following are merely a few of the most common sense examples of what unprepared beginners do.

- The teacher works through a series of math problems on the blackboard. After solving each one, the teacher turns to face the class and asks, "Does everyone understand? Are there any questions?"
- The teacher assigns the same homework to everyone in class, moving through the text in sequence.
- The teacher marks students' exam papers by noting the students' mistakes and placing a grade at the top.
- The teacher reads students' compositions and circles incorrect usage or spelling.

- The teacher praises students (e.g., "Right," "fine," "correct,") without explaining the reason or basis for praise.
- The teacher structures lessons so that pupils will always seek answers and never try to frame questions.
- The teacher emphasizes that getting assignments finished on time and in full is of greater value than the quality of what is done; work that is only partially complete or late cannot possibly be of high quality.
- The teacher discourages group assignments or cooperative projects because in the real world each person supposedly operates as an individual and has all his work judged independently.
- The teacher regards pupils who follow directions and are punctual as intelligent.

The list is much longer. To teach unprepared beginners that such teaching behaviors must be reflected upon, I have recorded dozens of their directions given in the course of a single hour. At the end of the hour I have asked these beginners, "Where did you get the idea that giving directions like: 'Boys line up here, girls over there,' or 'Those who finish, put their heads down,' or 'Put your name on the left and the date on the right,' are the way to conduct a class?" In every case, the beginners have responded with the fact that they never really thought about the procedures, or that these were the directions given to them when they were children in school. Beginners without preparation are very likely to relive their recollections of their own school experiences in an unreflective, ritualistic manner.

As negative as the effect of such common sense teaching is for pupils' learning, it is even more disastrous for class discipline and class management. The unprepared beginner, engaging in ritualistic behaviors, soon finds him- or herself in a situation where pupils are not learning as much as they might be. Common sense discipline methods lead to a breakdown of order, and a downward cycle is set in motion.

Following are just a few examples of behaviors that have been demonstrated by research to be effective. Which ones might be used by unprepared beginners who simply follow their common sense or relive their own school experiences?

- withitness behaviors
- overlapping behaviors
- developing cooperation
- role playing
- promoting productive group norms
- developing group cohesiveness
- extinction
- time out

- satiation
- incompatible alternatives
- modeling
- shaping
- contingency contracting
- self monitoring
- modifying the classroom environment
- mild desists
- administering punishments
  (see Weber, Roff, Crawford, and Robinson, 1983)

A very few of these teaching behaviors will be reenacted or self-discovered (e.g., mild desists and punishments). A few others may or may not be learned in a liberal studies program (e.g., role playing). The overwhelming number of these behavioral skills, however, will not be learned by neophytes—or even thought of by them—unless it is part of a well-planned, systematically offered teacher education program.

Except for mild or extreme punishments, therefore, there are few if any of these behaviors that unprepared beginners can be expected to utilize. This is not to claim that those who have had teacher education can perform all of these behaviors satisfactorily: The contention is that students who have been taught these teaching skills, have observed master teachers perform them, and have practiced them with children and youth, are more likely to use these practices as beginners and less likely to lapse back into common sense or ritualistic behaviors.

There are also higher order learnings that are a vital part of a sound teacher education program that are not amenable to observation. Concepts of child development may be effectively taught to beginning teachers in spite of our inability to prove that they refer to these concepts as they teach. Teacher education programs are like those in the lower schools. Because basic skills are more readily evaluated than higher orders of learning, skills become inordinately important in evaluating program effects. We can observe a teacher's ability to maintain order more readily than we can observe the teacher's ability to use principles of human development in planning learning activities. Does our inability to readily observe forms of pedagogical knowledge make this knowledge worthless?

For many, teacher education programs also serve the invaluable function of helping students self-select out. While this may be perceived as not good enough by critics who want the universities to do the failing, it is, nonetheless, a useful and unheralded value of teacher education programs. After learning the complexities of teaching, or being turned off by conditions in the schools, or because of other job offers, or for a variety of unknown reasons, large numbers of graduates never seek teaching positions. Fourteen states report that only half of their fully certified teachers ever enter a classroom (Feistritzer, 1984). If this figure is representative, there is a valuable screening service that teacher education programs are performing—one which does not waste the time of children and youth in schools. Pupils also "encourage" ineffective teachers to quit but at much greater cost in time and learning.

Summary

A large and increasing number of young people have handicapping conditions: physical, emotional, linguistic, behavioral, cultural, economic or, very likely, combinations of several such conditions. There is no rational basis for connecting success in university liberal studies programs with meeting the complex needs of such special students.

Common sense is an inadequate approach to understanding the workings of the school bureaucracy. Popular solutions for improving teachers' performance (even salary increases) must be carefully worked through particular school settings to ensure that their actual effects will be positive. Improving the conditions of work may be just as vital as increasing salaries, if raising teacher productivity is the goal.

Finally, beginning teachers, who are unprepared, utilize procedures that reflect their own schooling or that simply seem sensible. Many (if not most) of these ritualistic teacher patterns actually prevent the establishment of a positive classroom environment for pupil learning. There is much experiential and research evidence, therefore, to support the contention that the teaching behavior of well-educated, well-intentioned, but untrained adults is very frequently counterproductive.

Teacher education graduates produce substantial numbers of certified graduates who never seek teaching positions. This process is less harmful than placing beginners into classrooms and having incompetents screened out by pupils.

A Final Note

The chief obstacle to diagnosing educational problems is that the symptoms are frequently far removed from their sources. We need to search for the most reasonable connections between problems and their causes without being deterred by our inability to completely understand all of the intervening factors, or our inability to prove that we have accounted for all of the causes in these long chains of events. In this search for connections between symptoms and sources, insight that generates plausible explanations is our greatest ally—the need for specious certitude, our persistent enemy. Difficult, important conditions that we can only partially explain by making plausible arguments should not be avoided in favor of questions that can be answered with great certitude, but which contribute little to our understanding of serious problems.

The next cycle of pressure on the public schools is already taking shape. The demands for excellence are being mitigated by the demands for access and for serving all constituencies. Dropouts are increasing and General Education Diplomas in lieu of high school diplomas are also increasing. In Wisconsin, for example, the number of youth who do not attend high school and simply earn an equivalency diploma via the GED examination route is increasing from 1/5 to 1/4 of the total high school graduates. In many localities, the demand for more vocational preparation in high school is already exerting greater pressure than are calls for excellence.

At the same time, schools of education will soon begin expanding to meet the demands for new teachers. The combination of these two trends could motivate many teacher educators to simply ignore the present debates and to return to business as usual—cranking out large numbers of teachers from the same old programs.

This would indeed be unfortunate. The present opportunities to improve the school conditions under which teachers practice and the opportunity to upgrade teacher education should not be missed. If it really is true that half of all the teacher education graduates come from only 17 per cent of the 1,287 teacher preparing institutions (Feistritzer, 1984), then changes do not have to be very widespread in order to have a significant impact on American education.

There are few responsible leaders who really believe the extreme position that teacher education is, as a concept, worthless. Their criticism of teacher education focuses, rather on teacher education as it is practiced in many institutions and on the graduates of those programs, who are clearly substandard in basic achievements. The response to these criticisms is not for teacher educators to circle the wagons, but to join with responsible critics and to improve our programs. Few outside critics have been as harsh as the teacher educators themselves at their annual meetings or in their own publications.

In truth, the great challenge for teacher educators is that they are middlemen between school practitioners on their left and arts and science faculty on their right. The school practitioners would eagerly transform the whole teacher education program into one of on-site school practice, while the arts and science faculty would keep expanding the number of university courses as the only road to excellence. The leadership and control over teacher education will, as in the past, devolve to those individuals who can negotiate these differences and who can reshape teacher education programs to actually respond to the next cycle of demands on public education.

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II

From Quantity to Quality: Teacher Education in Britain

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Comparative education is, in many ways deservedly, less popular than it once was. Neither the study nor the practice of education is assisted by glib and superficial comparisons and contrasts. Scholars, now more prudent than they were twenty or more years ago, are disposed to stress the particular or the idiosyncratic within educational systems.

Such particularism and scepticism constitute a hygienic reaction to exaggerated claims for what could be achieved by comparative studies and to the naive assumption that reforms simply might be transplanted from one cultural context to another. This paper will, therefore, make no bold claims supposing that the British experience has anything to "teach" the United States, or any other developed society. But it is grounded in a belief that the reaction against global comparitism (if it may be so labelled) has now gone too far. The dangers of superficial universalism have given place to those of narrow insularity. British opinion, for example, is now dangerously ill-informed of educational developments elsewhere in the world. Conversely, and given the restricted range of the British experience, it can be argued that such experiences—treated in an analytical and ethnographic spirit—can be deployed to illustrate some important general principles bearing upon the evolution of the professional education of teachers (Judge, 1982).

Throughout this paper the term "British" will be employed as a synonym for the cumbersome "English and Welsh." The generalisation offered would not apply entirely to Northern Ireland, and hardly at all to

Scotland—where so much of the educational provision has, for historical reasons, a profoundly different structure. Moreover, the use of the term in a restricted sense (to which no further or political significance should be attached) makes the statistical comparisons simpler to interpret.

The British case study is useful precisely because of its relatively small scale and effective isolation. The conditions are close to those of a laboratory. Fewer than half a million teachers are employed within the system. Beneath the rhetoric of partnership, of devolved power, and of autonomous local government subsists the reality of determined management by central government (Hencke, 1978). The levers are handled by relatively few hands, and the power of London is greater (within its much narrower range, of course) than that of Washington. There is a serious sense in which London is an imperial capital that has lost its empire, although the mighty engines of state remain in place. Government policies and initiatives, themselves no doubt reflecting changes in opinion as well as in demography, have an immediate impact upon a small and tightly knit system. In the United States, on the other hand, there is a much richer competition of authorities and pressure groups so that both policy and practice tend towards a greater diversity.

The British case-study illustrates the results of a decline in the quantitative demand for teachers associated with growing public expectations of (or anxieties about) the performance of teachers. These parallel changes, reflected in the title of this paper, have been systematically managed and manipulated by a central government that sees itself as responsible for the general shape of educational provision and for the furnishing and planning of the necessary resources (Fenwick, 1981).

The dramatic changes of the 1960s (Kogan, 1975) broke the moulds into which teachers education had been poured. Teacher education, or teacher training as it was more modestly described, had since the nineteenth century developed within two distinct traditions. For the elementary school teachers there existed the two year teacher training colleges, from which the universities stood carefully and often disdainfully aloof. For university gradutes intending to teach in academic secondary schools (grammar schools), the universities provided one year courses of teacher training—although for many graduates such training was regarded as superfluous and was not legally required until 1973. The neatness of this separatist arrangement was qualified but not destroyed by the growth after 1944 of universal secondary education. That education was, of course, provided partly in the traditional grammar schools and partly in the "non-academic" secondary modern schools. Teachers for the latter were drawn from both traditions of teacher training, but the broad distinction between the two main routes of teacher preparation persisted (Dent, 1977).

It was only in the 1960s that this relatively simple pattern was shattered by the determination of the Labour government to substitute for the classical European pattern of secondary education, with academic schools for the minority, a national system of comprehensive secondary schools that owed much to the influence of the American high school (Fenwick, 1976). The implications of that change have not yet been fully recognised, but it is surprising that so little attention was at the time given to the consequences for the patterns of teacher education. The dual system of teacher education survived in spite of the fact that the dual system of public schooling, which it had been designed to serve, was being systematically dismantled. Only in the 1980s are the consequences of this anomaly being addressed as policy issues.

There is one obvious reason why in the mid-1960s little attention was given to the problems of the shape or style of teacher preparation. Quite simply, there was an even more urgent problem—the problem of numbers, the imperative to provide enough teachers (of whatever kind) for an expanding system, to fulfill a political promise to reduce the size of classes, to lengthen the period of compulsory schooling, and to extend the length of training for teachers from two years to three. The achievement was a massive one: The capacity of the teacher education system was doubled (from 60,000 places to 130,000 places by 1972). The dominant concern was with quantity. Other changes were largely symbolic, reflecting the aspirations of teachers' associations to secure a higher status for their professional formation. The teacher training colleges were renamed Colleges of Education and a new degree, the Bachelor of Education (B.Ed.), was introduced (Layard, 1969).

Expansion on this scale and at this speed inevitably raised problems of quality and of credibility. Rigorous standards could not be respected (in some important senses they never had been) in the recruitment of students to courses. Staffing the Colleges, where most of the expansion took place, presented equally difficult problems. No large pool of talent existed in which to fish for faculty who enjoyed good academic qualifications as well as sound professional experience. Where there was conflict between these two sets of criteria, the first was generally accorded priority. Although many of the contemporary criticisms may have been exaggerated, there was by the end of the decade of expansion a persuasive volume of criticism of the effectiveness of teacher education. Much of that criticism was marked by the indictment that teacher education had become too theoretical, that its delivery was uncomfortably distanced from the real world practice, and that it did not address either the basic needs of the primary school or the now more complex requirements of a comprehensive secondary system.

Such criticisms led to the appointment by Margaret Thatcher, when she was Secretary of State for Education and Science, of a small committee of enquiry under the Chairmanship of Lord James of Rusholme, then Vice-Chancellor of York University. The James Committee attempted, with few signs of immediate success, to redress the imbalance within the system. In particular, it argued for a new emphasis upon the post-experience professional development of teachers, for a stress upon professional rather than academic qualifications, and for a consecutive rather than a concurrent pattern of teacher education. It proposed, in other words, that within necessarily different institutional patterns the student should first concentrate on the subject matter of her or his higher education (in the humanities, in mathematics, in foreign languages, or whatever) and therafter advance (in the "second cycle" of development) to a preoccupation with pedagogy, the development of professional skills and the interpretation of such practice within a framework of educational theory (DES, 1972).

Such reforms, were they to be adopted, would modify fundamentally British understanding of the nature of teacher education, eliminating the formal distinctions between the education of teachers of younger children and of adolescents or between teachers of "academic" students and of "the rest." Although their immediate reception was far from friendly, the argument of this paper is that the dramatic collapse of numbers (of pupils in schools, of teachers needed for them) has, in fact, produced circumstances in which qualitative change has taken place. Moreover, the initiative in securing that change has been seized (not always openly) by the central government. That initiative has involved not only the concentration of teacher education on a reduced number of sites but also a carefully sustained effort to define what the purpose and nature of teacher education should be. A concern with quantity has, therefore, been reinterpreted as a concern for quality.

The quantifiable facts are plain enough. A system that had a capacity for some 60,000 students at the opening of the 1960s and had expanded (mindlessly, the critics might argue) to 130,000 in little more than a decade now has been cut back again to a total of 43,000. The system is smaller than it was before the drama began, and very different. In particular, and within fifteen years, the number of sites on which teacher education opportunities are offered has been cut back from over two hundred to about eighty, and the story is not yet concluded. The rationalisation, with all the ruthlessness that it necessarily implies, has been achieved by central government and its agencies. Higher education in the United Kingdom is not, and never has been, a free market.

The rationalisation has been influenced by two other factors of great importance. The first, which has aroused surprisingly little public discussion, has been the preferential treatment of the universities where (it is apparently believed) much of the "best" teacher education takes place. The cuts, undertaken in effect by the Department of Education and Science, have fallen upon the other institutions of higher education, outside the universities. As a result, whereas university sites represented (at the height of the expansion) only 13% of the total number of institutions offering teacher education, their share has now risen to 32%. Such a rapid change in market sharing obviously offers serious opportunities for qualitative improvement.

The second factor that has influenced this engineered rationalisation has been a growing emphasis upon the general preferability of the consecutive to the concurrent mode of teacher education. In 1972, the consecutive mode furnished only 22% of the output from initial teacher education. By 1982, the relevant figure had risen to 54%—of which 55% was accounted for by the universities. In other words, the two factors identified above have reinforced one another to generate a system in which there is at one and the same time a greater concentration within the university sector and a firmer emphasis upon the consecutive pattern—subject matter first, to put it crudely, and professional training afterwards. Even within the B.Ed., now representing the only concurrent route to the status of qualified teacher, there has emerged a strong tendency in course planning to observe the principles of the consecutive philosophy.

Central government has been the principal actor in generating these changes, which have been for the most part determined by considerations of resources, demography, and political reality. In that sense, the Conservative government has since the General Election of 1979 demonstrated the same behaviour as its predecessors—offering, for example, a mirror image to the Labour government of the late 1960s, given the preoccupation of the latter with the need to expand rather than contract provision. Higher education in Britain, in all its forms, is highly dependent upon government funding, and adjustments in the flow of these funds produce the creation, expansion, contraction or elimination of institutions. Inevitably, therefore, the changes of the later 1970s, and the 1980s, have produced a greater concentration of provision. Similarly, and without necessarily having regard to any more general or ideological principle, governments have found it easier to dispose of institutions outside rather than inside the universities. Universities, especially those of international standing, have more powerful friends and heavier weapons with which to fight.

The rationalisation of the past decade is, therefore, a companion piece to the expansion that preceded it. But it increasingly is marked by a new development, namely an explicit concern with quality and its definition as distinct from less value impregnated questions of quantity and resource. This, in its turn, is part of an overtly interventionist policy by central government—whether in managing more directly the finances of local government, in seeking to determine questions of curriculum, or in moving towards a national definition of the qualities of "a good teacher" (Burgess, 1980; Judge, 1985).

Hitherto, the British mechanisms for assuring the quality of teacher training, as for certifying and licensing teachers, have been surprisingly weak. The concept of accreditation deploys none of the power that it has long enjoyed in the United States (Young, 1983). The British Secretary of State alone has the power to grant or withhold the status of qualified teacher, but in practice that authority has in the past been exercised by chartered Universities or by the other colleges and establishments whose academic and professional awards are validated by the Council for National Academic Awards. These various bodies have, no doubt, acted responsibly, but they have done so without being formally accountable to any authority legitimated to speak either on behalf of the teaching profession or for the public interest.

The present Secretary of State, Sir Keith Joseph, has made no secret of his discomfort in contemplating such loose and ambiguous arrangements. An important White Paper on "Teaching Quality" in 1983 was followed within a year by the publication of the criteria upon which the acceptability of teacher training should be judged and by the formal constitution of a Council for the Accreditation of Teacher Education (CATE), all the members of which are nominated by the Secretary of State. Within a few years, the Secretary of State will confer the status of qualified teacher only on graduates who have pursued successfully a course of professional education and training in an establishment approved for that purpose (see DES, 1983, 1984).

The published criteria, which may be varied from time to time by the Secretary of State, will reinforce many of the principles and procedures already identified as being consonant with the pursuit of quality. Given that a considerable measure of concentration already has been achieved, the criteria will require further that particular attention be paid to subject matter studies, that those concerned with the teaching of pedagogy should themselves have had good and recent experience in schools, that practising school teachers should be involved closely in the selection and supervision of student teachers, that classroom skills should be taught effectively, that future teachers should be able to identify and provide for the special needs of pupils, and so on.

The social conditions in Britain of the 1980s (notably, a decline in the number of students in schools and in the demand for teachers) and the political conditions (notably, a marked increase in the control of educational policy by central government) have combined to make possible the fulfillment of many of the ambitions of the James Report. This paper is not essentially concerned with the desirability of those ambitions, but is directed, rather, at an examination of the factors that have permitted so rapid and dramatic a change in the nature of teacher education. The dominant conclusion is that these factors are social and political, rooted in constitutional circumstances and geography. The question for the United States, proferred in the moderate spirit of a comparative perspective, is an obvious one: Where and what are the corresponding levers for change in a society that lacks, for good or ill, such simplicities?

There are, however, other questions raised by this brief examination of the recent British experience. They are questions of principle that deserve examination outside the British Isles, and would be clarified by such a scrutiny. The lack of such scrutiny is, in my view, another of the unfortunate consequences of the erosion of comparative studies. Too much, within educational systems, now happens in national privacy. One general question relates to the effectiveness of changes in teacher education, of the sort here described. Of every three British teachers, two are now below the age of 35. The rate of regeneration of the teaching force, given the high recruitment rates of recent years, will therefore be slow. Concentration on the initial preparation of teachers might for this reason be to some extent misplaced. The James Report, in its emphasis upon the third cycle (the first being the higher education of the student and the second the initial professional preparation), argued for a redistribution of priorities. It seems doubtful whether Britain will, in fact, see this kind of major change this century.

The British experience of accreditation particularly but not exclusively in programmes of teacher preparation is, as has already been argued, slender. The prevailing orthodox assumption nevertheless appears to be that the statement of criteria, the machinery of visitations, the counting of course hours, the specification of content and method, the elaboration of licensing arrangements, will lead to an improvement of quality. This remains to be proved, but some will wonder whether bureaucratic elaboration, as a corollary of heavy and rigorous accreditation, will, instead, tend to stifle intelligent innovation. Some British universities may become restive at the attempt to impose detailed prescriptions; they may be tempted to distance themselves (where they have any choice) from the obligations of teacher preparation. The experience of American universities may be significant here (Judge, 1980, 1982).

Accreditation for other professional programmes—in medicine, for example, or engineering—has tended in Britain to be relatively lighthanded and to depend upon a strongly consensual view developed within a tightly organized profession. Conflicts, sanctions, or disaccreditation have been rare. But the world of teaching is embarrassingly different from these precedents, and there is a deeper problem entangled in the accreditation issue. The Department of Education and Science is, albeit not in the formal sense, the employer of teachers in the public system and certainly has a decisive voice in determining nationally agreed levels and structures of salary. It is also, for the University as for all other establishments of higher education, the source of funding and the most powerful partner in the planning exercise. There are obvious dangers in adding to such weighty powers the right to determine the content and emphasis of teacher education and to appoint the accrediting body charged with securing compliance. It is ironical that a government, sharing many principles with its contemporary in the United States and dedicated to reducing the impact on public life of governmental authority, should be propelled by its commitment to quality into the acquisition and exercise of ever-widening powers.

The interpretation of quality, which has now succeeded the anxieties about quantity, owes much to the principles of the James Report and is rooted in an honest disenchantment with some of the more ethereal theorising that marked teacher education a decade and more ago. A concern with the improvement of daily practice in real schools is to be celebrated. But there is surely a danger that an exclusive attention to such imperatives may deintellectualize the preparation of the teacher, turning it back towards models of apprenticeship (Wilson, 1975). Given the declared opinions of the Secretary of State, it is hardly surprising that the word "sociology" should not once appear in the criteria, even if its absence will cause some wonderment to international observers. Surely it is even less defensible that philosophy, or psychology, or history (as applied to the understanding of educational development) should be similarly conspicuous by their absence.

A doubt of a very different kind lies beneath the surface of this author's narrative. It is a doubt that has grown in the public mind in the course of 1985. At the beginning of that year, the supply of good graduates wishing to become teachers was buoyant, and no crisis seemed imminent. During the year, and the process is far from ended yet, wide-ranging discussion has emphasized that the low level of teachers' salaries makes it probable that teaching will not continue to attract good quality candidates when the employment markets pick up and the economy revives. The unprecedented industrial-style action of the teachers' unions has further amplified this doubt,while damaging the British public's hesitant recognition of teaching as one of the key professions in society. For that reason, the problem of quantity may not, after all, have been solved, and its re-emergence may yet drive from consciousness and policy the emerging concern with quality. At the same time, proposals for the restructuring of the profession (if it is one) and for novel styles of teacher appraisal raise questions about the simple and traditional definitions of "the teacher" and uncomplicated prescriptions for "teacher preparation" within which the British system has for so long operated. There are new lessons to be learned, and they should not be attempted in isolation.

The argument of this paper has been that, with certain important qualifications, substantial changes recently have been effected in both policy and practice for teacher education in Britain. Weak and inadequate programmes and institutions have been eliminated. A consecutive rather than a concurrent style of teacher education has been generalized. Much of teacher education has become a graduate rather than an undergraduate activity. The share of teacher training undertaken by prestigious universities has been increased. Determined national efforts have been made to give teacher education a sharper cutting edge. "Professional" standards have replaced theoretical instruction, while the importance of a knowledge base in subject studies (science, mathematics, languages) has been stressed. Most significantly of all, the impact of such changes has been secured by the publication of national criteria and the creation of a strong and unambiguous accrediting agency.

These are matters of fact, and it is clear that many of these changes would be welcomed within the United States. They all represent a shift in emphasis from quantity to quality. That shift has been made possible by the abrupt decline in the demand for teachers, again an international phenomenon. But is has in effect been achieved within a relatively small system by the determined action and control of government. Here, therefore, transatlantic analysis breaks down. Even on the fringes of Europe, the dominance of government in the management of teacher education is contentious. It is not a price that everyone would wish to pay for reforms, however desirable they may be.

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Section Two

Perspectives on Teacher Education: Content and Structure

To prescribe how teacher education should be structured, it is imperative that teacher educators first clearly define what makes "a teacher." Specifically, what are the requisite skills, attitudes, dispositions, intuitions, and understandings of the classroom teacher? Is a teacher someone who is socialized to the status quo or an individual who challenges students to envision new social possibilities? What should be the preservice curriculum for a teacher preparing to work with students? And what resources are needed to develop such a curriculum? These questions provide a conceptual foundation for the ideas discussed in chapters 3–7.

In this section, the authors explore different dimensions of professional training. Each author addresses the types of questions outlined above. Meade, for example, examines the essential teacher characteristics that have relevance to teacher education and that have been culled from the multiple national studies on schools and education. The teacher must, according to Meade, be well educated, intellectually curious, knowledgeable in his or her areas of specialization, cognizant of the economic and social system of American society, appreciative of how children and adolescents grow and develop, expert in "coaching" the student learning process, intellectually active as a learner, and committed to teaching as a career.

These characteristics establish a tone for a certain type of teacher education: an education that professionalizes what teachers do and become. The ideas are particularly significant because they represent the perceptions of a non-teacher educator about what schools, departments, and colleges of education should be doing and about how they ought to be doing it. They are the statements of an "outsider" looking in. And they suggest something about the types of expectations that dictate a direction for and the demands on the teacher education of the future. Teacher educators will be expected to attract (and hold!) academically able students, to develop a professional knowledge base that includes broader university perspectives and involvements, and to create collaborative extra-university involvements with numerous significant others from schools and local communities.

Whereas Meade's focus is on the teacher and the conditions necessary to train the teacher, Kluender's emphasis in Chapter 4 is on the teacher educator and the conditions of effective practice for teacher education. Her analysis focuses more narrowly on how to use the extant knowledge base to engender improvements in education. Kluender acknowledges the influence of state regulatory policies on teacher education, but she asserts that such powers should not be a barrier to appropriate self-direction by teacher educators. Teacher educators need not be captives to policymakers. They can dictate, to a large extent, the content of the curriculum—a content that should be infused with ideas from the most recent research on teaching.

One missing element in the Kluender piece is a thorough discussion of how to close the gap between the lectures by faculty members on the efficacy of research and instructor attempts to model for prospective teachers the teaching behaviors highlighted in the literature. Indeed, Champion (1984) found, in one Eastern state, that although 97 percent of her sample of teacher educators mentioned research findings in class, only 37 percent actually modeled the research-based behaviors for students. That modeling is potentially one of the most important dynamics to helping students understand and use behaviors on teaching strategies in classrooms. Reece, Berns and Heath (1985) found that preservice teachers do notice if instructors model research-based teaching behaviors and "more than half of the students said this modeling approach influenced how they taught during their student teaching" (p. 6). Still, more data are needed relative to how teacher educators provide for and use empirical findings in the curriculum and in their own teaching. As Putnam (1985) suggests:

> The relationship of a teacher educator's personal style and the success or failure of a given model must also be investigated.... What is important ... is to understand that we do not have data to guide us in our decisions about our own instruction. (p. 41)

The third chapter in this section, by Dubitsky, deals with the content of teacher education, and particularly with the ways in which new knowledge is assimilated into the curriculum. Dubitsky's emphasis is specifically on computer education, but her observations have broad application. The Dubitsky article outlines what happens with new ideas and new technology over prolonged periods of time. It is a confirmation of how the cycles in education include stages of "romance" and "precision." In the stage of romance, "subject matter [or technology] has the vividness of novelty" (Whitehead, 1929, p. 17). New ideas and new technologies have an unexplored "wealth" and an inherent attractiveness.

Over time, however, that new knowledge tends to be systematized, and systematized knowledge soon becomes boring, drained of its possibilities and nuances. Structure supersedes content and even teachers have difficulty seeing beyond the immediate curriculum. Dubitsky shares a marvelous anecdote:

> Two years ago I was a consultant to a school where they were just beginning to teach Logo to junior high students. The children, for the most part, were having a wonderful time exploring the language, figuring out what it could do, working on projects that used what they had discovered. The teachers had learned the language the summer before and were very shaky. They were also very appreciative of what the children were accomplishing. I went back to that school this year and found that the teachers had devised booklets stating the projects children should learn to do. They were rushing them through the concepts and vocabulary of the language. They had erected Logo achievement levels for the children. The language was no longer one that could be explored and used but something one had to learn and to measure for achievement. The teachers were no longer shaky, and the children's work was no longer genuinely appreciated.

Dubitsky's experience with computers is not unique. Teacher educators have been down the "fad" lane many times before, and in each case they have had difficulty maintaining the vitality of the new ideas. The new soon becomes old and is translated into a variety of curriculum packages, programs, videos, and booklets. Implicitly, Dubitsky's article is a warning to teacher educators—a warning about barren knowledge. Such knowledge is either not used by its possessor or is used apart from wisdom. Whether it is the teacher who force-feeds software without taking cognizance of the students' developmental needs or the teacher who asks higher order questions without taking into account the students' prior knowledge, the principle is the same: "The habit of active thought with freshness can only be generated by adequate freedom. Undiscriminating discipline defeats its own object by dulling the mind" (Whitehead, 1929, p. 32).

Computers or the new knowledge base of teaching have efficacy only if they unlock for practicing teachers the doors to reflective and critical thought. The vitality of knowledge is lost once it is reduced, systematized, or over-structured.

Raywid, in Chapter 6, describes schools of choice and how such schools will place demands on the type of teacher to receive a certificate. Schools of choice are those schooling alternatives or options established to respond to the particular interests and concerns of students. Such schools have unique needs and make powerful demands on teachers. Teachers, suggests Raywid, must be able to cope with the autonomy that goes along with designing a school curriculum; they must be able to work with colleagues who may have quite different philosophies and perspectives; they must be able to fulfill a variety of roles and responsibilities; and they must be willing to explore and to accommodate different independent study arrangements and experiential learning structures.

Teachers who have skills such as those described above will need, argues Raywid, very different and, in some respects, more rigorous forms of professional training. For example, their education may need to be more interdisciplinary because they will be expected (at some magnet schools) to collaborate with colleagues in teaching courses, concepts, or skills. Or, they may need more work in understanding the socio-cultural backgrounds of students, especially given the wide range of student needs evidenced in magnet schools. Actually, one is struck more by the similarities of preparation practices for school-of-choice teachers and regular teachers than by the differences. Indeed, one could even argue that given the homogeneity of some magnet school student populations (for the visual arts or vocational education) that the demands are even less compelling than would be evidenced at a comprehensive high school. At least in a magnet school, a school of choice, there are some clearly defined values about what education means in that context. The teachers in such schools may not necessarily have a wider variety of instructional techniques, as Raywid suggests they should possess, but they may be more inclined to teach with energy, not "by exhaustion," because of their belief in the importance of the subject matter. Durden (1983) observes, in a comparison of a school-of-choice and a regular high school, that:

> This juxtaposition [in teaching practices] is intended to make a general observation. There are, of course, lively, stimulating academic classes at Northside [a regular high school], but they are, on the whole, not as overtly engaging of these students as the performing arts classes. (p. 105)

The final chapter in this section, by Nutter, establishes a framework for understanding what conditions and resources must be evidenced to provide a quality teacher education program. The basic elements are prescribed: a competent faculty, sufficient time for professional socialization, academically able students, collaborative and cooperative relationships with schools, and adequate physical facilities. Within each of these dimensions, Nutter describes some of the general problems and needs associated with current practice. Her descriptions are, of necessity, superficial and time-bound. Research has been conducted, although it is limited in quantity, on several of the dimensions cited by Nutter. Research suggests, for example, in the area of faculty expertise that where and how a teacher educator was trained affects how he or she will teach (Raths and Ruchkin, 1985); that teacher educators have had rich and varied experiences in school settings at the elementary and secondary levels despite what the reform reports assert (Ducharme and Agne, 1982); and that education faculty members are as productive, if not more so, than other faculty members in terms of conducting research and preparing books (Schwebel, 1982). The third aspect is surprising because evidence suggests that education faculty must devote much more time to administrative tasks than do their counterparts in the biological and social sciences (Schwebel, 1985). Such findings have import for how teacher educators respond to demands that they be better trained (Where?), that they have more field contact (How much?), and that they provide a more intellectually rigorous curriculum (Will they be given the time to teach and conduct research?).

The issues surrounding providing adequate teacher training are, indeed, complex. As the above discussion suggests, few, if any, clear-cut answers can be proffered to the myriad possible questions. What Nutter provides is a framework for understanding the issues and for identifying what resources are needed in order to structure programs appropriate for prospective teachers.

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III

Recent Reports on Education: Some Implications for Preparing Teachers

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There have been a number of recent national reports on the condition of education and schooling in the United States. Most of these studies about schools are based largely on analyses that can be framed in four operational questions:

1. What are schools doing?
2. How are they doing it?
3. What are the results of school activities?
4. What ought schools do in light of present and future demands?

RECOMMENDATIONS

From studies addressing these questions, there are many recommendations that have implications for the preparation of teachers. Overall, the recommendations produced by these studies seem to fall into four categories. First, changes in the structure of schools in such areas as finances, teacher salaries, time schedules, and special arrangements, have garnered much support. A second area of suggested change is toward a restructuring of the content portion of schooling—aspects of curriculum, courses, homework, and academic requirements have been targeted. Third, the value system supported by and inculcated in students by schools have been questioned. Criticisms of whether the maintenance of traditional return-to-the-past standards of focusing schooling have been raised by some studies; additionally, recommendations toward a future-oriented or forward-looking value perspective, or a combination of new and old have also received support. Fourth, a call has been made for people changes (largely about teachers, calling for quality).

There is no paucity of recommendations; many differ from others, some to the point of conflict. However, there are common elements on which the aforementioned types of recommendations are based. Again, virtually all studies express visions of what schools need to do and why they need to do it. Also, studies suggest a general dissatisfaction with the current state of schools vis-a-vis what the future will demand of them. Finally, there is overall agreement that the teacher is the vital agent for improving instruction and learning and the key ingredient to better instruction in schools.

IMPLICATIONS FOR TEACHER PREPARATION

From these common elements it is possible to draw general implications for the preparation of teachers. First, however, it is necessary to bear in mind that the recommendations in the national reports deal as much with "what ought to be" as they do with "what is." Therefore, to deal with these recommendations it is necessary to know what schools should be like and why they should be that way before recommending any plans to prepare teachers to work in them. It is not enough simply to relate to what schools currently are like and, therefore, to what is needed in the way of new teachers. In short, teacher education, too, needs a vision—realistic, yes, but enlightened as well.

There is currently much public dissatisfaction with schools and schooling. The dissatisfaction seems to stem largely from the various, and sometimes different, visions of the future that are held by those engaged in research studies. Researchers' perceptions of what the future means for schools and teachers are, to say the least, varied. In any event, any plans or recommendations for preparing teachers should include the following:

First, we should start with a reexamination of what practices and principles undergird the current programs of teacher education. It is essential to find which ones seem to "fit" the particular future and which do not.

Second, this reexamination should be followed by an assessment of what is missing from current teacher education programs. Questions must be asked about what new policies and principles need to be augmented, which areas need to be revised or changed for the future, and which areas should be discarded.

Third, any plans and recommendations for educating teachers must be designed with a strategy for implementation that will allow for evolving the necessary changes in a realistic, efficient, and expeditious fashion.

If we accept the general assumption that the teacher is the vital agent for improving instruction and learning, then the implications for any plans of change for collegiate-based teacher education must include the consideration of issues in schools as well.

Our attention needs to be directed toward the consideration of what ought to be the shape and substance, as well as the procedures and processes, for preparing teachers. In that regard, we must target the general academic responsibility for preparing teachers at institutions of higher education. Additionally, the specific responsibilities of the teacher education component in the college or university and the role of the schools themselves for preparing new teachers must be defined more precisely. A corollary to such focusing of responsibility is this: Much thought must be given to the nature of the responsibility and to the role of the college or university for the working conditions in which the teachers it prepares must function. This issue is as important for these colleges and universities to address as is the issue of preparing teachers.

AN ANALYSIS OF TEACHER CHARACTERISTICS

The spate of some 20 nationally-focused studies released over the past few years produced few specific recommendations about teacher education *per se*. Still, one can review what these studies expect of teachers in schools, and from that review derive a number of common characteristics of teachers. Using these characteristics as a base for analysis, it is then possible to draw a set of general implications and recommendations for teacher education.

The review to collect such common characteristics of teachers from these studies produced either characteristics as follows:

1. A teacher should be a well-educated person.
2. A teacher should be an intellectually curious person and a person interested in others.
3. A teacher should know the subject matter he/she is expected to teach.
4. A teacher should know and support the essential character of American society—its history; its economic, political, and social systems; its democratic principles of equity, equality, and participation; and, in that context, the character of its public schools, and its evolving academic mission to prepare students to learn and to work as citizens.

5. A teacher should understand how the student learns. Indeed, the teacher needs to understand learners: their development, their circumstances, their cultures, and their modes of learning.
6. A teacher should be the pedagogical "manager" or "coach" and not the "worker" or "player" for learning; that is the role of the student.
7. A teacher should be a continuous learner—about his/her academic responsibilities, pedagogy, constituents—and be active in the intellectual life of the society.
8. A teacher should be able to look forward to a career in teaching—one that allows for variation and increased responsibilities and rewards.

CHANGES IN TEACHER PREPARATION

The aforementioned eight teacher characteristics have far reaching implications for teacher preparation. A review of these characteristics in the form of a brief outline will define their implications for colleges, universities, and schools of education.

1. The Teacher as a Well Educated Person

a. *Premise*—The teacher should be a person who is at home and secure in the world of knowledge; one who understands generally the major academic disciplines well enough to participate, albeit modestly, in their affairs; one who can serve as an academic or learned role model for students; one who has this general education to undergird specific instructional assignments.

b. *Program Prerequisites*—An assumption is made that a candidate will have completed, or soon will complete, a solid general or liberal education at the collegiate level; also, a candidate will possess a broad education in the arts, the humanities, mathematics, and the physical, biological, and social sciences to the extent that he/she has a reasonable knowledge and conceptual base regarding them, their interrelationships, and their relationships to society. The implication here is more toward the general or liberal collegiate education and not to that of teacher education per se.

c. *Undergraduate/Graduate*—This area is inconclusive, but most reports lean heavily on teachers acquiring a substantial general education. Given present circumstances, this may mean five-year teacher education programs rather than four-year ones.

2. The Teacher as an Intellectually Curious Person

a. *Premise*—Education is essentially an intellectual activity, especially for developing such critical skills as inquiry and problem-solving. Intellectually curious people tend to foster curiosity and inquiry in others, and are themselves more interesting as persons. For teachers, intellectual curiosity is as fundamental as is the interest in helping others.

b. *Recruitment*—The need to encourage candidates who demonstrate the desired curiosity and inquiry skills in intellectual matters, in learning, and in other educational and social endeavors.

c. *Admissions*—There is a need to find ways and means to identify the intellectually curious students who wish to be teachers, particularly among the more academically able ones. Such a pool would identify, it is thought, a greater number of the intellectually curious from which to start this search.

3. The Teacher as a Knowledgeable Person

a. *Premise*—A teacher is expected to teach something, namely, a field of content or subject. As such, a teacher should have mastery of the subject matter to include: (a) *scope*—breadth and comprehensiveness of the academic discipline; (b) *depth*—the level of scholarly quality, particularly in the structure and tools of the discipline and how its knowledge is produced and tested; (c) *coherence*—the degree to which the teacher can reconstruct the conceptual structure and organization of knowledge from a program of study; and, (d) *diversity*—the adequacy of preparation in related subject areas from his/her general education.

b. *Program*—A concentration in a discipline or field of study that is conceived and carried out by faculty in that discipline in ways to assure mastery. The implication for secondary school teachers (or single subject matter specialists) is clearer than it is for elementary teachers (or multi-subject matter teachers). It calls for: (a) faculty in the disciplines to have a well-conceived concentration of course work that allows for mastery and not merely an accumulation of courses in the area; and (b) a concentration that "fits" with a person's general or liberal education. This characteristic is somewhat like that of general education except that it is concentrated in a single discipline or, in some cases, two related ones (e.g., the double major).

4. The Teacher as Part of the Society and a Profession

a. *Premise*—The American school exists and functions within the context of society. Therefore, its teachers need to understand their responsibilities in terms of the economic, social, and political development of the nation, and increasingly, they must view that development in the larger world context. Further, the academic (or intellectual) mission of the American school is rooted in social and moral thought from throughout our history. For American schools, that mission is also rooted in a context of equal opportunity and equity for those it serves and for those who serve it. American education is distinctive and has evolved over time from these unique sources. Teachers are inextricably a part of American history and American character.

b. *Program*—Teachers will need to know about the political, economic and social systems of American society and also education's relationship to them. Also, teachers should know the philosophical underpinnings and evolutionary pattern of American education in order to better understand its place and role in society. This seems to imply a greater emphasis on broad historical knowledge and on ethical and philosophical thought. The responsibility for the development of this component seems pointed primarily to faculty in relevant academic disciplines of a college or university, and not, necessarily, to its teacher education component.

5. The Teacher Knowing the Student

a. *Premise*—Teachers are teaching an increasingly diverse range of students. They need especially to know how students develop and learn, both individually and collectively.

b. *Program*—More emphasis on understanding child and adolescent development using broader social science perspectives including, for example, those of anthropology and sociology, in addition to that of psychology, which currently is too dominant and, understandably, too limited. This component also implies a need for more emphasis on how different individuals learn. The implication is that such knowledge and training will be the responsibility of faculty in relevant academic disciplines throughout the college community rather than a task assigned exclusively to the teacher education component. It also assumes some first-hand experience with children.

6. The Teacher as a Pedagogical Manager or Coach

a. *Premise*—Emphasis on helping others to acquire and understand the knowledge base and undergirding concepts to allow for greater inquiry and increased problem solving skills. This would place less emphasis on the teacher as the primary source of knowledge.

b. *Program*—Research suggests fewer specialized courses in methods are needed. Instead, a teacher should have a broader knowledge base and more complete understanding of sources of information, curricula, and about means of delivery (e.g., media, technology). Teachers need to be trained more in the mode of "coaching," rather than in the formal lecture or knowledge-giving mode. More of this pedagogical training should be in a clinical, rather than in academic, setting, largely with the responsibility assigned to teachers who already are able managers or coaches of learning by students. This may well lead to more close and sustaining collaborative arrangements between colleges and schools for the clinical or pedagogical training of new teachers.

7. The Teacher as a Continuous Learner

a. *Premise*—As new knowledge, new technologies for instruction, and new pedagogical problems arise, the teaching role changes. A teacher who is constantly learning and improving his/her knowledge base, pedagogical skills, and overall teaching capacity is more able to meet new challenges and better assess and use new tools for instruction.

b. *Program*—Schools would be expected to build more sustaining and systematic on-the-job teacher development activities. More teacher education will be school-based or school-focused, rather than campus-focused. It is expected that teachers will receive more help from peers and colleagues in their schools rather than from outside specialists, such as those in college or university teacher education units or in central offices of school systems. Arrangements will change in school to allow for on-the-job teacher development to take place on a regular basis (e.g., time for teacher exchanges, observation of others). Perhaps more study and sabbatical leave opportunities for teachers should be provided. Also, more leadership by principals is expected in managing teacher development programs. Finally, teachers will be expected to participate more broadly in the intellectual life of the community, beyond that strictly related to teaching. To accomplish this would mean viewing teachers as peers with other professionals—less separation, for example, of math teachers from mathematicians and other math-related professionals. Also, additional opportunities for teachers to produce intellectual property (e.g., to write, to advise) would certainly be useful.

8. The Teacher as A Career Person

a. *Premise*—There is little opportunity for a teacher to advance and be rewarded as a teacher without leaving the classroom. Teachers should not have to leave teaching to progress professionally. New arrangements need to be made for teachers to advance and be rewarded for teaching.

b. *Program*—Several program options are possible and are described below.

   (1) *Merit schemes.* Some suggestions involve evaluating teacher's performance within the context of the performance of other teachers

and/or in relation to expected student goals. One might also assume that part of the judgment about merit could be related to a teacher's further academic development (such as courses taken at institutes and colleges). If so, a market could be built for colleges, but more in discipline-oriented, rather than professional, courses.

(2) *Career ladder schemes.* The advancement of teachers from "beginning" level to "master" level has received attention. Perhaps, again, part of the assessment will be based on the teacher's self-initiated development efforts (e.g., college courses). This might also mean that a teacher would have to acquire additional supervisory skills for which college level courses might be applicable.

(3) *Differentiated teaching roles.* Creating different kinds of roles for some practicing teachers would enable them to help other teachers while still teaching, with full, or more likely, reduced loads. This implies identifying some teachers who would serve as resources for staff development in their schools, as, for example: (a) a teacher who is a scholar in a discipline; (b) a teacher who is a trainer of other teachers; and, (c) a teacher who is skilled in classroom research. Each might be given release time and, perhaps, added salary incentives (e.g., subsidized "chairs") to use their specialities to assist other teachers. Teachers with such specialties and who have such arrangements might replace other specialists now found in teacher education programs (e.g., those who supervise interns, conduct on-the-job workshops, develop curriculum), as well as certain staff specialists now found in central offices of school systems. Teachers with such specialties, particularly those in scholarship or research, also should be more able to relate directly to academic specialists (e.g., scholars in the disciplines, researchers in universities) without having to go through intermediaries such as curriculum supervisors or the teacher education faculty.

In outlining these expected teacher characteristics and their implications for teacher education no mention has been made about particular research bearing on them. By and large, the national studies did not address the area of previous research in their reviews and recommendations for improving schools and teachers. Such an omission is understandable as the studies did not dwell on either research in general or on the specific role research does, or might, play toward changing schools. Certainly, the studies used research data and findings (their own and that of others) to present the current state of schools and to reinforce certain recommendations. However, with few exceptions, the studies about schools are moot on the matter of research as it bears, or might bear, on improving schools or preparing teachers.

RECOMMENDATIONS FOR TEACHER EDUCATION

At this point it is necessary to summarize the recommendations for teacher education. Again, the eight previously defined teacher characteristics will be used as a framework.

Before being designated as a candidate for teacher education, a person should already be, or should be well on the way to being, generally well-educated. There is no consensus whether or not that implies completion of college before teacher education or during it but, increasingly, it seems to add up to more than four years of college to develop a teacher. Also, the characteristic of a well-educated teacher has implications for the academic content of current liberal or general undergraduate education.

Clearly, there is an expectation that teacher education will recruit and select more academically able, more suitable (e.g., intellectually curious) candidates from the pool of students who are well-educated. The quarrel seems to be not over quality in general, but, rather, what "qualities" should be sought.

Beyond the general education level, developing a teacher's professional knowledge base will be more the responsibility of the whole college and university rather than in the teacher education component, especially in the areas of: (a) philosophy, history, economics, and political science (with regard to American society in general and, specifically, the role education plays in it); (b) the social sciences, especially those dealing with children and adolescents and how they develop and learn; and, (c) the academic disciplines for subject matter teacher specialists (particularly for secondary school teachers).

Professional or clinical training for teachers will be far less dependent on teacher education faculty and, instead, will be more collaborative between such faculty with real schools and, particularly, with experienced mentor-type teachers in them for the following: (a) learning how to teach, particularly how to manage and coach learners; (b) continuing to learn and develop on-the-job; and (c) advancing one's career as a teacher.

In short, then, there seems to be expectations that the colleges and universities in general, rather than their teacher education components alone, along with the schools themselves, should take more responsibility for preparing teachers. This broadened responsibility could mean that teacher education units in higher education will be less responsible for directly providing all or even the bulk of the programs to prepare teachers. However, these teacher education units may need to take on added—and in some cases, new—responsibility, namely, to be a more effective coordinator between mainstream college faculty and school personnel in order to monitor their collective work and to produce quality teachers. To repeat, the teacher education unit will not be expected to carry as much of the direct responsibility for preparing and helping teachers as it now does. That, alone, could lead to new possibilities for the creation of improved teacher education units in terms of size and kinds of faculty, assignments, and programs. If neither the general college nor university community nor the schools accepts what appears to be their emerging collaborative responsibilities for preparing teachers, it could lead to different forms of teacher education. Such forms could be manifested by: (a) a return to separate free-standing collegiate-level teacher training institutions; (b) entrepreneurial programs offering various kinds of training institutes, seminars (by existing or new non-profit or profit-making organizations, by school systems themselves, teacher organizations, even state education agencies); or, (c) little or no preservice teacher education, leaving those who become teachers to learn solely or almost wholly on-the-job. All are possible; none seems desirable.

Education has not been the only activity that recently has undergone systematic examination and study. Perhaps the best known "other" study of this kind focused on America's best-run companies and businesses, as reported in the best-selling book *In Search of Excellence.* The study identified eight basic principles that were perceived as basic to the success of a sample of best-run companies. Possibly, they are relevant here. In any event, they are presented with a commentary about their potential relevance to teacher education and schools.

1. A bias for action. Do something rather than just producing cycles and cycles of analyses and reports. At the very least, this implies a need for higher education officials, especially those responsible for educating teachers, to actively lead and do, not only to study and advise.
2. Stay close to the customer. For schools, that means keeping in touch with the student; for teacher education, the teacher.
3. Autonomy and entrepreneurship. The individual school should be seen as the locus of teaching and learning. This increasingly is apparent from other research, such as that on effective schools and how to improve them, resulting in various school-based management schemes and school site plans. For teacher education, it could mean preparing teachers and other school-based personnel (e.g., principals) with greater capacities to make instructional decisions.
4. Productivity through people. Create an awareness among educators (and teacher educators) that their best efforts are essential and that they will share in the rewards of success. This calls for those responsible for teacher education to learn from their prod-

ucts—practicing school personnel—as well as from their learned colleagues.

5. Hands-on executives. Insist that the top managers (e.g., deans, presidents) keep in touch with the enterprise's essential business. In this instance, that essential business is preparing teachers and improving schools.
6. Stick to the knitting. Stay with the business or the program the enterprise knows and does best. In essence, that means educating teachers first, and conducting research related to that education process and research about learning more generally, to support the effort to better prepare teachers who can help others to learn.
7. Simple form, lean staff. Few administrative layers should exist and few people should be at the upper levels. This, too, has its implications for educating teachers, especially for their clinical training and further development on-the-job. The capacity for helping them in both cases needs to be more school-focused, if not actually school-based. This also implies that many of those who help them should probably be among them (i.e., in schools) rather than somewhere else, such as in colleges.
8. Simultaneous loose-tight properties. Foster a climate in which there is dedication to the central values of the enterprise and combine that with tolerance for all staff who accept those values. At the very least, this implies the need for more equal status of teachers with those in higher education. They are not "teachers as students"; they are peers. It also may imply an academic, intellectual, or professional freedom for teachers, not unlike that so properly and zealously guarded by those in higher education.

These principles derived from successful businesses may not be directly "on the mark," but they are hardly unrelated to the health, well-being, and usefulness of any enterprise. This includes teacher education. In short, there is an affirmation that the chances of success are greater when an enterprise knows what to do and why; when it focuses on that task and does it well; when it keeps the task as simple as possible; when it uses its resources to do what its resources must do to accomplish the task; and when it engenders trust. Trust: there is a novel base on which to build efforts to prepare teachers.

IV

The Nebraska Consortium for the Improvement of Teacher Education

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In June 1983, the 15 higher education institutions in Nebraska that have teacher education programs formed the Nebraska Consortium for the Improvement of Teacher Education. The Consortium was established to provide a collaborative means by which institutions could examine research that has significance for teacher education, share information about programs and activities in the several teacher education programs, and provide a support network as the institutions work on program improvement. The purpose of this paper is to describe Consortium's formation, activities, and future.

BACKGROUND

During the past ten years, there has been a major increase in the amount and quality of research on teaching, learning, and effective schools. Studies on how teachers plan and make judgments in the classroom about individual students and instructional strategies (Shavelson, 1982), how teachers organize and manage their classrooms (Brophy, 1983), and how they use instructional time (Denham and Lieberman, 1980) are examples of research areas that have developed during the last decade and that provide some guidance for practice to the classroom teacher. As a result, education now has a foundation of knowledge derived from research upon which to make decisions rather than having to rely solely upon knowledge acquired through the practical experiences of individuals or teachers.

Although the research base itself has expanded, the results of that research have been implemented only to a limited degree, either in the classroom or in the training of teachers. One of the accusations that has frequently been made against teacher education is that it does not use a theoretical, research-based body of knowledge in its training programs. Thus, it perpetuates the practice of teaching as a craft rather than as a profession. B. O. Smith (1980), in *Design for a School of Pedagogy,* suggests that although the research on general concepts, principles, and skills of teaching and classroom management has grown and become more dependable, there is reason to believe that a large portion of the education faculty in most institutions trains teachers with little knowledge or utilization of that research. Others support Smith's position, and emphasize the need to incorporate the research base into the preservice education of prospective teachers (see Denemark, 1982; Berliner, 1982).

To accomplish such a change, however, a mechanism is needed by which institutions and individual faculty members can become more knowledgeable about the research base and can examine and modify course content and teaching behavior, if appropriate. One approach to the improvement of teacher education programs has been to increase external controls through the enactment of legislation that mandates competency testing programs or increases the specification of program changes. In most cases, such externally imposed mandates for improvement have been developed with little active involvement of teacher training institutions, and in some cases, such as New Jersey, the proposed improvement strategies actually function outside the teacher education programs.

An alternative approach to statewide program improvement is the initiation and implementation of improvement efforts by teacher preparation institutions. Such an approach is supported by what we have learned about change during the past two decades. The traditional change models, which followed a linear pattern of research, development, dissemination, and implementation, for the most part were not very effective in causing long-term changes in practice. The reason for this, Tikunoff and Ward (1983) suggest, is that such an approach is product-oriented; a particular innovation, program change, or research problem is developed by one group to be implemented passively by another. This is contrary to the way most people learn or change. Tikunoff and Ward argue that a more appropriate strategy is a collaborative inquiry model, in which those who must make the instructional improvements are involved in the research and development process. Teacher education programs face similar challenges as they attempt to make changes. The knowledge base about teaching and effective schools has, for the most part, developed outside most teacher education institutions, which are now expected to find ways to incorporate that knowledge base into existing programs. The Consortium was formed in part to provide a collaborative setting in which to foster positive change at an institutional level.

CONSORTIUM MEMBERSHIP

The Consortium for the Improvement of Teacher Education is made up of all institutions that have teacher education programs in Nebraska. They include the two campuses of the state university system: University of Nebraska-Lincoln and University of Nebraska-Omaha; the state colleges, Kearney State College, Peru State College, and Wayne State College; and nine private colleges and universities: College of St. Mary, Concordia Teachers College, Creighton University, Dana College, Doane College, Hastings College, Midland College, Nebraska Wesleyan University, and Union College. Of the 15 institutions, all are state approved, and 13 have NCATE accreditation. The enrollment of the institutions ranges from approximately 500 to over 24,000. They graduate between 25 and 560 certificated teachers per year. The fifteen institutions provide over 90% of Nebraska's new teachers each year.

THE CONSORTIUM'S GOALS

When the Consortium was proposed in June 1983, a set of goals was outlined. They include the following:

1. To develop a network of teacher education institutions that will work in close cooperation toward the improvement of teacher education in the state;
2. To increase faculty members' confidence in and knowledge of the research base to the extent that they will use appropriate portions of that research in their own programs;
3. To change the nature of teacher education programs in participating institutions so that they will be more amenable to use of the teaching/learning and effective schools research base.
4. To develop faculty members' willingness to study research publications along with other faculty groups and to build the results of their study into their courses and preparation programs.
5. To develop in students the knowledge of, the confidence in, and the skill for working with the research base such that they will draw upon that base during both their teacher education programs and their regular assignments.

At the initial meeting to explore the consortium concept, all 15 institutions with teacher education programs agreed to use these goals as the beginning statement of the consortium's intent and to participate in the consortium in an attempt to meet those goals.

CONSORTIUM ORGANIZATION: THE FIRST YEAR

Once all the institutions agreed that they wanted to participate in the Consortium, a two-day workshop on selected research was planned. Each institution agreed to send faculty to the workshop. Those teams have remained fairly stable since the consortium's beginning. In most cases, team members were selected because of their positions in the undergraduate teacher education program, their interest in research, their use of research in their programs, and their ability to provide leadership for program change. In some cases, because of the size of the teacher education program, the team represented a substantial portion of the total education faculty. In other cases, the team was a cross-section of a much larger faculty.

The team structure is an important feature of the consortium, because teams provide a mechanism through which action can take place on campus. By studying research and making plans as part of a team, faculty members were expected to carry plans into action once they returned to their campuses.

Before attending the workshop, the team members were asked to do some preparatory reading. Each institution was provided with a set of materials that included papers on teaching, learning, and effective schools; publications on the effective utilization of time; and a bibliography of other research references. About two months before the workshop was held, each institution also was asked to provide background information about its teacher education program, including the submission of such materials as a current college bulletin, requirements for graduation in the teacher education program, and syllabi from several key teacher education course. A preliminary analysis of that information was done prior to the workshop.

The two-and-one-half day workshop was planned with several goals in mind. First, team members who attended the workshop should have an opportunity to read and discuss research and to meet with a few of the researchers who have made important research contributions. Second, teams should have an opportunity to consider the research in relationship to their own teacher education programs and develop some specific plans for action. Third, the workshop should provide a setting that might lead to informal networks among institutions, which could be helpful as institutions implemented their plans. To accomplish those goals, the workshop provided time for presentations on research, for discussion among the institutional representatives, and for institutional planning. The first day emphasized review of research, discussion of implications, and dialogue among participants. The second day provided a time for team discussion and planning.

Three types of presentations were included in the workshop. Six concurrent sessions focused on specific research topics that have been major areas of research emphasis in recent years. Those sessions were conducted by University of Nebraska-Lincoln faculty members. The two sessions that focused on implementation methodology were conducted by people who are directly involved in implementation activities with teachers. Three sessions served an integrative and synthesizing role and provided a structure to the workshop by drawing principles from the more specific sessions and raising some philosophical and policymaking questions for team members to consider as they made decisions about institutional action plans. (These presentations were published by the ERIC Clearinghouse on Teacher Education as the first of their monograph series on teacher education under the title, *Using Research to Improve Teacher Education: The Nebraska Consortium.*)

Discussion sessions were interspersed among the workshop presentations to allow workshop participants with an opportunity to ask questions and talk about the implications of the research findings for teacher education programs in general and their own institutions in particular. Beginning on the second day, each institutional team began to develop an institutional plan and to describe the steps the team proposed to take after the workshop.

SECOND YEAR ACTIVITIES

During the remainder of the 1983–84 academic year, the institutions worked toward the implementation of their plans. In June 1984, a planning group met in conjunction with the spring meeting of the Nebraska Association of College of Teacher Education to plan activities for the 1984–85 year. They agreed to hold a second meeting in the fall, at which time the teams would report progress toward achievement of their plans, attend additional research review sessions, and set directions for future activities of the consortium.

The second workshop was held in the fall of 1984. During the first part of this workshop, a panel reported on the progress of the 15 institutions as they reported them in summaries in late August and early September. Two sessions focused on research and the implications of the research base for teacher education. Two other sessions focused on the change process—workshop participants participated in several activities designed to help establish some goals and directions for the consortium.

Progress on Action Plans

As reported by the panel, progress toward the implementation of the action plans developed during the first year ranged from minimal to fairly extensive. The approaches that the institutions took were quite varied, as the following brief examples will demonstrate. Kearney State College conducted a symposium for faculty, students, and school personnel in which they reported on the research efforts of their own faculty. The University of Nebraska-Lincoln held two workshops for its faculty in the undergraduate teacher education program. They focused specifically on research related to classroom management and decision-making, and are now in the process of deciding how to integrate that research into their undergraduate program. The University of Nebraska at Omaha has revised several courses based on current educational research, and has added a new graduate course, "Effective Teaching Practices," which is based on current research findings. Doane College has made some tentative decisions about what they want students to learn about research in their undergraduate program, and has made some decisions about how they will integrate the information into their undergraduate program and their initial Practicum course. Hastings College conducted faculty inservice and is beginning a newsletter for area educators and recent graduates that will include information about recent research. It also is planning a graduate level course for the dissemination of research data to and training of cooperating teachers. Concordia Teachers College held a series of faculty inservice sessions and has worked systematically to incorporate the research on effective utilization of time into its curriculum. Other institutions reported similar activities that focused on faculty development and curriculum revision.

Most of the institutions noted, either in their written reports or in their comments, that it is very difficult to separate those activities that were a direct result of the consortium plans and those that are part of a broader institutional improvement process. However, in at least some of the cases, improvement activities can be directly traced to the action plans developed one year ago and to the research sessions presented at the first workshop.

Research Sessions

Four faculty members from consortium member institutions conducted sessions in which they reviewed the research on specific topics. Member institutions were surveyed earlier in the summer about topics they wanted to have reviewed. The topics that were chosen also supplemented the reviews presented at the first year's workshop. Team members selected sessions in which they were most interested.

Planning for the Future

When the planning team members organized the second workshop, they realized that it was going to be vital for the larger group to tackle questions about the consortium's future structure, purpose, and goals. While the consortium appeared to be successful in its attempt to provide inservice on current research, less attention had been paid to one of the more powerful elements of the original design, that of collaborative efforts among institutions. It was decided that part of the second year's agenda would be used to discuss the research literature on change, to relate the change literature to the consortium approach, and to make some decisions about future organization. One University of Nebraska-Lincoln faculty member with extensive faculty development and networking experience was asked to run two workshop sessions on networking and institutional collaboration, and several deans were asked to participate in a final panel discussion in which they discussed ways in which the institutions might collaborate on research, development, and dissemination efforts.

The purposes of the networking sessions were: (a) to identify the individual and common needs of consortium members; (b) to identify the contributions of each to the consortium; (c) to identify any barriers that might prevent the consortium from functioning effectively, and (d) to identify a structure to meet the identified goals and needs of consortium members. During the two sessions, small multi-institution groups discussed these topics and identified a list of common needs that might serve as a basis for future consortium action. They included:

1. To provide a central "clearinghouse" to disseminate information to consortium members about significant research, to assess educational needs of the state, and to offer information about national efforts to translate research into practice in teacher education;
2. To provide a means for teacher education programs to "speak with one voice" on issues of importance to teacher education in Nebraska;
3. To provide a support group for institutions as they work toward program improvement;
4. To expand the resource base of individual institutions by conducting joint staff development activities and joint planning of data collection activities and by calling upon individuals from other institutions with special expertise; and
5. To identify the components and qualities of "good, solid teacher education programs."

The group proposed that these five needs should serve as the basic for future planning and that a sixth need, to identify (in a more formal way) the decision-making structure of the consortium, also be addressed. A one-day planning meeting that included a representative from each of the 15 institutions was held to work on those issues.

At that planning meeting, Consortium representatives decided to request that the Nebraska Association of Colleges for Teacher Education

(NACTE), a state level affiliate of the American Association of Colleges for Teacher Education (AACTE), serve as an umbrella organization to formally sponsor the Consortium. The rationale for such a request was that NACTE, which includes all teacher education programs, in Nebraska, serves as a political and policy voice for teacher education in the state; the Consortium, as a related but independent organization, could serve as the research and programmatic voice. NACTE includes institutional representatives. The Consortium includes faculty who may or may not be representatives, but who have a particular interest in research and program issues. The two groups should be able to complement and inform one another. One other important task that the planning group initiated was to begin a plan to build a data base on teacher education in Nebraska.

THIRD YEAR ACTIVITIES

The theme that the planning committee selected for the Consortium's third annual meeting was the cognitive development of teachers. As in previous years, the meeting's organization included presentations by nationally recognized researchers and syntheses of research by Consortium members. Lee Schulman (Stanford University) presented a paper on the subject knowledge that teachers must have, and the relationship of the knowledge base to effective teaching. Five concurrent sessions followed Schulman's presentation. To presenters in each session focused on a particular aspect of teacher education (foundations, methods, field experiences, inservice) and reviewed research on how that aspect contributed to the cognitive development of teachers. Walter Doyle, from the University of Arizona, served a synthesizing role at the conference. His task was to help groups within the Consortium begin to structure their own research agendas. By the end of the conference, several inter-institutional faculty teams had identified potential research topics and had begun initial plans for collaborative work.

ISSUES RELATED TO CONSORTIUM ACTIVITIES

At the end of the second year of Consortium activities, three issues were identified that were of some concern: organizational structure, funding, and long-range tasks. By the end of the third annual meeting, two of those issues had been somewhat resolved. The third issue, funding, remains an issue that probably will be handled on a year-to-year basis.

Organizational Structure

During the first two years, a few people coordinated the consortium's activities and called together planning groups to help with specific activities. By the beginning of the third year, it was apparent that a more formal organization was needed to assure continued involvement of all interested institutions and that questions about alternative levels of participation of the fifteen institutions, which range in size, resources, and ability to participate, might need to be addressed.

Two steps were taken to formalize the organizational structure. First, in April 1985, NACTE agreed to sponsor the Consortium and appointed three of its members to serve as a planning group for the third annual meeting. Second, at the October 1985 meeting, the Consortium agreed to form its own Board of Directors, composed of one representative from each institution, to do detailed planning on programmatic and research efforts.

By October 1985, there appeared to be less concern about differentiated membership, in part because the potential program of research identified as a result of the conference seemed to lend itself to differentiated participation. Several of the potential research projects are based on a case study method that will allow all sizes of institutions, or individuals within institutions, to participate.

Funding

Almost all of the consortium's activities to date have been funded by the institutions themselves. Each institution has sent teams to the workshops at local expense, and all faculty time has been contributed. The lack of external funds up to this point has been seen as an advantage because the consortium has been able to evolve without the constraints of funding guidelines or proposals to limit its direction. In order to move ahead on substantive issues, however, the consortium will need financial resources. At least two of the institutions have expressed willingness to provide some faculty release time and operating expenses to specific consortium activities, and it was suggested that a differentiated dues structure might be considered. As specific research topics are identified, external funds may also be sought. However, there continues to be concern among consortium participants that external funds be used only if the consortium's autonomy is preserved.

Long Range Tasks

By the end of the second year, Consortium members agreed that the Consortium needed to focus on long range tasks that it would undertake—tasks that would be unique to a multi-institution organization. Consortium members continued to value the staff development activities sponsored by the Consortium and wanted such efforts to continue; however, they also wanted to develop activities that could not be done by individual institutions alone. At that second year meeting it was suggested that the consortium might expand upon the idea of a central clearinghouse for research and think of itself as a state-level research, development, and dissemination center through which data might be gathered on questions of particular interest to Nebraska.

To move in that direction, the third annual meeting focused not only on cognitive development of teachers but also on methodology by which Nebraska institutions could begin to gather data on their own students and programs in ways that are feasible, given the limited financial resources and time available.

CONCLUSION

Teacher education programs are influenced to a large extent by state mandates. The state, through its certification and accreditation processes, its legislation and its regulatory powers, plays a significant role in the nature of the requirements preservice teachers must meet and the courses or programs they must take. In some states, this regulatory function is quite explicit and detailed. In others, the institutions have more latitude within the state's guidelines. But in all cases, the teacher education programs in both public and private institutions are influenced to some degree by the policies, philosophy, and character of the state.

Teacher education programs are also influenced by the institutions of which they are a part. An institution's teacher education program reflects the philosophy and values of the larger institution, the characteristics of its faculty and students, and the clientele served. Thus, within one state, institutions may operate within the framework of the same guidelines but approach teacher education from quite different perspectives.

At the same time that teacher education programs are subject to the requirements and influences of the state and the academic institutions of which they are a part, they can, in turn, exert considerable influences upon broader organizational structures. One way to influence such structures is by explaining and interpreting the knowledge base in education. As the primary source of knowledge about educational research, members of the teacher education community have a responsibility to bring the perspective of the research base to bear upon the current debate about improvement in education, both to assist in improving the complex teaching/learning process and to inform policymakers.

The Nebraska Consortium for the Improvement of Teacher Education was established with these factors in mind. The Consortium members recognize that any attempts to improve the state's teacher education programs must take into consideration both the state's and the institution's goals and characteristics and knowledge about teacher education and effective schooling. The Consortium seeks to retain institutional autonomy and uniqueness, but to provide a collaborative means of support and improvement.

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V

The Implications for Teacher Education of Computer Technology

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I have great concerns about the mad dash that is occurring to put computers in schools. I am not a technophobe. I am not a computerphobe. I am Chair of the Computer Education Programs in the Graduate School Division of Bank Street College of Education, and in that role do a lot of work in the New York metropolitan area helping school personnel set up computer programs for children.

I am passionate about computers. I can no longer write a speech or an article (I can hardly write a note to students!) without one. I use a data base every day to look up student records. I even enjoy it when I must write a computer program for someone else. Yet I am very worried about the impact of computers on education in general and on teacher education in particular. My concern is that we are looking at the attributes of computers and teaching about these. We are not looking at the attributes of children and the nature of learning; we are not looking at how to use computers to further our educational goals for children.

In brief, basic concerns about computers in education include the following. First, emphasis has been placed on computer capabilities and not on the goals of computer education. We have examined the computer's capabilities and are, without much thought, stressing those functions in schools. The emphasis should be placed on what our goals are in the education of children and the examination of how computers can help us achieve those goals.

Second, it is not known, yet, what computers can do for education. All reports confirm the fact that there are very few pieces of software that are useful in schools. Why then are we buying millions of computers for our schools? We should, instead, have some limited number of teachers and children working with computers to see what they can do in the context of good education. Teacher education programs are the best places for this to happen.

Third, to paraphrase Alfred North Whitehead: A new phenomenon or material is exciting to teach or learn about, and then it becomes full of dry rot. When systematized, it gets boring. What happens to learning in most schools is that the juices are drained before the material gets to the children.

We are at a moment in history when some people are very excited about the connection between learning and computers. Why not let them use computers in non-structured ways so that they can begin to inform the education community about the possibilities for effective computer use?

The fourth concern about computers in education focuses on learner needs: Learning begins with the learner, and we need to know who the learner is. The process of finding out about the learner starts with the teacher—and, specifically, with how the teacher learns. Teachers must understand how they learn before they can really help students learn.

Fifth, there is an element of falseness concerning the powers of computers. Here, for example, are some of the misconceptions about what computers can do for teachers: (a) The computer enables teachers to individualize instruction; (b) The computer is a better manager than a teacher; (c) A computer will help people think; and (d) conversely, teachers and students will not have to think if they use a computer. These commonly held beliefs about computers simply are not true.

Finally, there is a concern about two other notions that are so powerful that they deserve to be mentioned separately. That is, that people will need to know a lot about computers to get jobs in the future, and that computers are so hard to learn about that school personnel must begin teaching three and four year olds about them or students will be left out of the future job market. These assertions bother me because I learned almost all I needed to know about computers as an adult, and I learned it almost entirely on my own (as have so many other adults and adolescents).

What is it that computers *can't* do?

They cannot, for the most part, teach anything very important without input from a very fine teacher. For example:

1. Word processors cannot teach writing. The word processor in the hands of a very skilled teacher can enhance that teacher's already

fine writing program by making it easier for children to edit their work, by facilitating collaboration between children on a piece of writing, and by making it easier to have clear, correct copy to share with others on bulletin boards.

2. Computers cannot teach mathematics. Children may learn math facts on the computer. (Here again it takes a fine teacher to make use of the right software at the right moment for the child who needs it.) But to really understand mathematics, a child needs to toss ideas around; the child needs to manipulate materials and discuss mathematical concepts. The use of the computer to aid in the process of learning real mathematics (i.e. problem solving, the relationship between multiplication and division or between derivation and integration) takes intervention, planning, and time on the part of a fine teacher.
3. Computer languages such as BASIC or Logo or Pascal will not teach problem solving or thinking skills. Again, a teacher with fine teaching skills and knowledge of a computer language can teach computer programming in ways that will promote problem solving skills. This will work especially well if the teacher is so excellent that he or she makes it clear when the child can use those skills in other problem solving tasks.

Computers are accepted already as cure-alls, with some educators and parents viewing them as magic machines. Why else would they cut the budget for library books in order to buy computers? Why else would they buy computers first and then later decide what to do with them? Why else would schools get funds from federal and state governments for computers when they can barely get enough money to provide decent lunches? Why are parents raising funds for computers when they are not able to raise money for a gym teacher or an art teacher?

What *can* computers do?

The computer's newness (and complexity) makes it a wonderful vehicle for helping teachers look, not only at how they learn, but at who they are in relation to both the subject matter and the learner. For example, when a teacher is learning how to do something at the same time as a child is learning, the teacher stands in a different relationship to the learner. They (perhaps for the first time) are truly all in it together.

Computers have caught on in schools because children like them and because children get great satisfaction from the fact that teachers do not know much more about computers than they do—in fact, teachers may know even less than students.

Two years ago I was a consultant to a school where teachers were just beginning to teach Logo to junior high school students. The children, for the most part, were having a wonderful time exploring the language, figuring out what it could do, working on projects that used what they had discovered. The teachers had learned the language the summer before and were very shaky. They were also very appreciative of what the children were accomplishing. I went back to that school recently and found that the teachers had devised booklets identifying the projects children should complete. They were rushing students through the concepts and vocabulary of the language. They had erected Logo achievement levels for the children. The language was no longer one that could be explored and used, but rather it was something one had to learn and to measure for achievement. The teachers were no longer shaky, and, unfortunately, the children's work was no longer genuinely appreciated.

What is the message for teacher education?

First, what teachers need to learn is exactly the same thing they have always needed to learn: Teachers have to know who the children are before they can develop logical learning goals. Teacher education programs often do not address this aspect of the pedagogical process.

Second, a new computer course should not be added to an already over-crowded teacher education program. The computer is a tool, not an area of study. (If one wants to help children become computer scientists and not just users of computers, the best way is to provide them with a fine mathematics program. Such a program should include not only the mechanics of math but the skills to explore further mathematical phenomena and to do genuine problem solving.)

The area of study on which teachers need to focus is the teaching/learning process. One way to study the process is by having many different experiences with (a) children, (b) your own learning processes, and (c) diverse materials and tools. Teacher education programs have to help teachers get their hands on materials and tools and experience them in many different ways. Teachers should talk about them, read about them, think about them, and then go back and experience them some more. What teacher educators need to do is to set up an environment in which people can learn and then encourage them to discuss and reflect on those experiences and on the implications for teaching.

Computer technology, because it is so new, is an excellent tool for use in reflecting on the teaching/learning process. The personal experience of learning to use a computer, if noted in detail and reflected upon, can provide insight to the teacher. The following are statements paraphrased or quoted from the papers of students in a course that aims at the understanding of the teaching/learning process through learning about the computer.

- I found myself getting up very often . . . to see what others were doing.
- I was one of a group of three learning about the speech synthesizer. The teacher was explaining and showing commands. I had to force myself to pay attention. I couldn't really understand until I had my hands on the computer.
- It was wonderful to have a partner to turn to when I didn't understand.
- I don't like to work with another person; it makes me too anxious. I need time for reflecting alone about what I have learned.
- I could not stand to be interrupted when I was deeply involved in trying to solve a problem. I simply refused to stop until I had solved it.
- Teacher colleagues can learn to cooperate among themselves and, finally, with their students.
- I approached computers with fear and even hostility until I was given time and space to reframe the problem as I saw it and to reach my own solutions at my own pace. When that happened, I was elated and I felt in control of the tool. It even caused a shift in my perception of myself. But it could so easily have happened the other way. I might have given up before I began, if those small successes with Logo had not been so tempting.

At the end of one paper a student remarked: "So what? So I learned about my own learning and I've learned about kids learning. But I have 32 children sitting in my classroom and most of them are failing. What do I do?" That question is a compelling one that is still unanswered by educators.

Educators are trying to figure out how to use the myriad resources available in classrooms to benefit the unique learning needs of children. One of these resources is the computer. It holds great promise because it can promote children teaching other children, children getting involved in learning experiences that stimulate them, and children taking charge of their own learning.

Computers can now do a lot of things that people used to do with great difficulty. For example, computers can find the integral and derivative of a function. Do students still need to know how to do this? Do students still need to know long division or multiplication of fractions? Do they still need to know how to use a dictionary if they have a spelling check in a computer? These are the issues that require focused discussion.

Some of the smallest things that teachers do in classrooms are the most important. And, even the most inconspicuous materials that teachers have in their rooms make a statement about how children are expected to learn, and about what the teacher values. Computers are among those materials that teachers are using to create an enticing learning environment for students. Indeed, computers constitute exciting tools for use in classrooms. But before purchasing more computers for schools and expanding the microcomputer curriculum, we should be clear about what can and should be accomplished. To that end, more time and resources need to be devoted to helping teachers understand the role computers can play in improving the education of children.

VI

Preparing Teachers for Schools of Choice

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An informed and persuasive prescription for preparing teachers for schools of choice requires a description of such schools and a diagnosis of what is responsible for the successful ones. Thus, we must begin with a look at some of the salient features of schools of choice, and an account of what makes them successful.

Schools of choice, or options, or alternatives, are of many types. In the public sector they represent a major mechanism for facilitating departure and permitting diversity—and the particular departures they have represented reflect a broad band of educational orientation and practice. When one adds the private sector to the array of schools of possible choice, the spectrum is extended even further. Religious schools are included, of course, along with schools that depart more extensively from typical and standard practice than do most public school alternatives.

Schools of choice have been established in American education to respond to particular interests and concerns of students, the particular needs of some students, the orientation and preferences of groups of parents, and the educational ideas of particular groups of teachers. Accordingly, the programs have departed from local practice and have differed from one another in various ways. Some depart from standard practice only with respect to one feature (e.g., curriculum, or school climate, or religious orientation), but remain quite typical in other respects. Other schools of choice, however, depart from traditional practice across a broad front (e.g., with respect to ethos, curriculum, instructional activities, and environments, and school structure and management). There has tended to be a difference in scope and extent of departure in the schools within choice systems on the one hand and the single alternatives established within more conventional school systems on the other. The sole alternative school within an otherwise fairly standard and traditional system is likely to depart further from typical practice than do each of the several schools co-existing within a school district that has placed its schools on an "options" basis. (This suggests the possibility that private schools might depart further from typical practice than do differentiated public schools. However, no systematic evidence is available to document this to be the case. Perhaps market concerns serve to moderate departures.)

There are many different kinds of alternatives or schools of choice. Magnet schools are often designed to respond to particular student interests, talents, or career aspirations. Individual alternatives sometimes have been targeted for particular groups, such as able students in search of a more challenging and compelling education, or underachieving students in need of academic motivation and success. But such schools often are designed for a cross section of students who, for a variety of reasons, seek an educational program or environment different from that which is otherwise available.

The distinguishing features of schools of choice tend to vary according to different age/grade levels. At elementary levels, the focus is likely to be on particular pedagogical style and arrangements, as in open schools, Montessori schools, or traditionalist schools. At the secondary level, however, schools of choice vary across a wider range of dimensions. Instructional orientation might be a major focus, but the emphasis is more likely to be either a particular curricular thrust or a particular school climate.

FEATURES OF SCHOOLS OF CHOICE

Evidence is now available on the effectiveness of schools of choice and on the unusual constituent satisfaction rates of all concerned with them, students, teachers, parents, and the broader community. A number of factors have been advanced to explain the success and superiority of such programs. Not all programs succeed, of course. But those which do, exhibit a cluster of features that warrant attention.

First, the choice feature itself appears central. It is possible to diversify schools within a district but to continue assigning students and teachers to them. Some districts have undertaken this approach, at least to some extent, in dealing with particular youngsters. It is reflected in some tracking programs and in those referral programs established to meet the special needs attributed to particular groups of students. However, such programs have often met with markedly less success than those in which both the teachers and students have chosen to be involved.

A second feature of schools of choice is that they are likely to be considerably smaller than traditional schools. Whether in separate buildings or structured as schools-within-schools, or as mini-schools, they constitute far smaller operating units in administrative terms than those to which educators have grown accustomed. Whether separately housed or not, these units operate with their own set of students and teachers who remain distinct from other such groups for instructional purposes.

A third feature that is associated with schools of choice is a great deal more autonomy and freedom from external mandates and prohibitions emanating from district, state, and federal agencies. So far as instructional matters are concerned, considerably more power to shape the educational program resides in the school.

A fourth attribute of schools of choice, and one closely related to the third feature, is that within the school individual teachers exert greater control over their own practice than is typically the case in traditional schools. They experience a broader range of discretionary power and less restraint from others in exercising their own professional judgment.

A fifth associated attribute is that teachers in schools of choice are likely to experience their own practice as more professional in nature and more efficacious in its effects than is the case in traditional schools. They feel sufficiently free of imposed directives to be able to devise and implement strategies tailored to the needs of their students.

A sixth feature often associated with schools of choice is an unusual degree of colleagueship. Teachers are likely to interact more, to depend on one another more, and to exchange professionally-related information and advice more openly and frequently than is typically the case in traditional schools.

A seventh feature of schools of choice is their cohesiveness. Such schools assemble a group of students, teachers, and parents who are related in some educationally significant way—through philosophy or interests or other proclivities. Thus, as some have put it, such schools almost appear to be organizations in which students have taken out "memberships," and within which a strong sense of affiliation tends to emerge.

An eighth, related feature of schools of choice is that they typically offer far more personalized environments than do comprehensive high schools. This enables the entire school as a social system to operate far more on *Gemeinschaft* than *Gesellschaft* principles, which affects communications structures, governance structures, and social control arrangements.

A ninth tendency is for schools of choice to adopt and actively pursue broader goals than conventional schools. They typically are concerned with a broader spectrum of knowledge acquisition, and with the sum of values, attitudes, orientations, and capacities of their students. They are rarely sheer academic or vocational institutions. Most are concerned with the full character of the maturing individual.

A tenth feature is that staff in schools of choice tend to have far more extended and diffuse roles than is presently the case in other schools. Teachers are likely to feel responsible for, and to perform, functions carried out elsewhere by administrators and other specialized personnel. For example, they may deal with parents and other members of the public, help youngsters think through personal problems, and do maintenance or custodial chores. Administrators, in turn, may well teach and be involved in instructional and other activities. Extended roles appear to be the inevitable counterparts of smaller school size, where fewer support services are likely to exist.

An eleventh feature is that students, too, are likely to have more extended roles in schools of choice. In some they may teach, in others do peer tutoring or coaching, in others help with school maintenance tasks, or in fund-raising. But they are responsible for more than knowledge acquisition and compliance, and they are likely to have more responsibility for themselves and their decisions. At least some evidence suggests that in public schools of choice, the greater the autonomy of teachers, the larger the decision-making role of students.

A twelfth feature of schools of choice is that they are likely to manifest considerable self-consciousness about and concern with what is variously called climate, culture, moral order, or ethos. Whether the alternative be a fundamentalist or an open school, an elite private academy or an inner city ghetto school, there is likely to be a strong preoccupation with the ineffable matter of school spirit or "soul." There is frequent talk of "what we are as a school and what we want to be," and there is frequent mention of such underlying principles as belief in and commitment to the success of all of the students enrolled.

Finally, a thirteenth attribute of schools of choice is that they tend to feature two kinds of instruction infrequently provided in other schools: independent study arrangements and experiential learning. Independent study is employed as a major means for individualizing instruction and it is used as a way of offering both more remedial and more advanced work than would otherwise be accessible, as well as for increasing responsiveness to particular student interests. Experiential learning of various types—internships, activities, service projects—are also prominently featured in academic, college preparatory schools of choice as well as in more career-oriented alternatives and magnets.

A number of other important attributes might be added to this list, such as the relative absence of disciplinary problems in schools of choice and their better attendance and retention patterns. But an effort has been made in listing these thirteen features to identify those that appear more generally matters of cause than of effect. Existing evidence tends to identify the features listed as the dynamics accounting for the beneficial effects of schools of choice. We are ready to turn, then, to the matter of what types of teachers such schools require. After we have attended to that, we will be in a position to discuss the preparation necessary to educate such teachers.

THE SPECIAL TEACHER ATTRIBUTES NEEDED

Teachers in schools of choice need to be both generalists and specialists. They need to be *generalists* because such schools typically eschew the sharp divisions of labor that encourage secondary school teachers to concentrate solely on one discipline. In contrast, the themed curricula in some schools of choice (e.g., the magnet schools with themes such as Aviation or Health Services or Sports or Humanities) require teachers to draw content from several disciplines and realms of concern. Such programs also frequently put teachers in the position of devising their own curricula and then of devising ways to evaluate students' achievement. So it is not only that they deal with several disciplines, but that they deal with content in several different roles. Teachers in such schools are not in a position to remain the consumers of curricula and evaluation materials devised and distributed by others. As educators, as well as in their role as subject matter experts, they must function more broadly than is often expected (or permitted) in the conventional school.

Teachers in schools of choice also need to be *specialists* to a degree not typically demanded of teachers in the conventional school. The teacher, for example, in an Aviation or Health Services or Sports magnet must know the theme area with a thoroughness not usually required of secondary school teachers who are more often charged with providing simply an introduction to the disciplines. In contrast, the teacher in the Aviation magnet must know the field, its technology and equipment, its occupational range and opportunities, its history, and its prospects. Without such mastery, the teacher is not in a position to respond to student interests nor to be able to fathom how to bring academic materials to bear upon them.

A major purpose of schools of choice is to make formal education more responsive—either to youngsters and their needs and interests, or to parents and their particular concerns. A serious effort at responsiveness must involve thorough comprehension of the traits to which one is responding. To be effective in meeting students' instructional needs—that is, in helping young people who learn in quite different ways—teachers need an understanding of what those ways are. To respond effectively to all students, the teacher must understand and be able to identify the individual who learns primarily through audial modes and to distinguish such a youngster from another who requires kinesthetic modes. He or she needs an understanding of the different needs of the analytic and the holistic learner, and to know how to respond to both. The effective teacher also must be aware of student differences with respect to the social context—and know how to structure the learning of one student so that it is independent and solitary, another so that it occurs in peer groups, and another so that it involves closer work with an adult.

The particular needs of learners is only one of the human dimensions, however, to which a responsive teacher must respond. Learner interests is another. Responding to student needs demands the kinds of content familiarity identified above, with, for example, sports or with aviation. But it is also in part a matter of understanding youngsters and their interests. We have recognized for some time that teachers need to understand human growth and development, but we have been much slower to see that they also need more than a passing awareness of student subculture. To know what is on students' minds, and what their concerns are, is important to determining necessary pedagogical starting points, and to maintaining motivation and interest. Teachers who intend to be responsive need extensive familiarity with the subculture of their students.

Schools of choice are also sometimes designed explicitly to respond to the values of parents, as is often the case with traditionalist, fundamentalist, religious, or prep schools. According to some observers, this is the primary dimension of the responsiveness of private schools, secular as well as religious. Especially in such cases, understanding of the orientation or ideology prompting the parental choice is of central importance to teachers. Whether, for instance, the choice is a matter of a distinct ethnic (cultural) orientation or of a more general socio-economic class identification can prove of enormous importance to home-school relations and to the continuing support of parents.

There is at least one more set of characteristics that teachers need in order to be good prospects for schools of choice. This is a matter of attitudes, beliefs, dispositions, and of general orientation. Prospective secondary school teachers whose preparation is being influenced by today's so-called "Excellence Movement" are being taught that their function is to contribute to the academic and cognitive development of their students. Period. Indeed, they are learning that taking on additional roles is what has ruined schools. To the extent that the preparation "takes," these students are also modeling a demanding, no nonsense stance in response to present "get tough" policy. They have been advised in relation to motivation to look not to the carrot but to the stick.

Now if we want to think in terms of schools of choice, such an orientation will never do. If schools are to be places without captive audiences, then they have to pursue rather different advice than that currently emanating from a number of sources in the name of excellence. Rather than assuming a get tough stance, they must transform themselves into institutions that are genuinely "user friendly"! For teachers, this means that a new commitment to responsiveness is essential. This is not to imply that students and their parents should dictate school practice. It does mean, however, that listening to their desires and concerns is standard operating procedure, along with attempting an accommodation that can satisfy both the professional and the personal interests of the various constituents. The teacher's obligation goes beyond performing in accord with what his or her subject-matter and pedagogical expertise would recommend. There are multiple sets of interests to be accommodated and criteria to be met.

Somehow, teachers for schools of choice must acquire a disposition to respond effectively and *successfully* to every single student. This is quite a different assumption from that which most teachers have internalized: the conventional stance, which the "Excellence Movement" strongly reinforces, is that the teacher's actions should be guided by what knowledge recommends. The obligation, putatively, is to fulfilling the demands and expectations of professionally sound practice—and one has fulfilled that obligation whether or not such practice proves unsuccessful for particular students.

What teachers for schools of choice must learn is that the charge is different and the obligations are different. If the patient dies, the operation was not a success. In schools of choice, teaching must be much more of a people-centered and a negotiated process. It is not a matter of decision-making power or student enfranchisement. Rather, teachers in schools of choice must be disposed to responding simultaneously to several sets of concerns: to professional knowledge and judgment to be sure, but also to what is of conscious concern to youngsters and their parents. Obviously such teachers must have rather different aspirations for and expectations of themselves than do "traditional" teachers.

THE PREPARATION INDICATED

Schools of choice, then, require a better prepared teacher than many of us are now graduating. As the above suggests, such schools also require teachers who have been prepared in unique and different ways.

One prospective student teacher's experience might be a good place to begin the discussion. This preservice teacher was seeking placement in a Long Island school of choice. When she arrived for her interview, she was stunned to discover that one part of the screening was handled by a large group, which included a substantial number of students. The students were not making the decision about her, but they were participants in the screening, and they had an opportunity to put questions about what they judged to be important. Among the questions they asked, were the following: "What would you teach if you came here? What courses would you want to propose as your courses?" "Why should students take those courses? What have you to offer us?" "What would you do if nobody liked your class?" "How would you handle a kid who couldn't stay awake in class, because a fight at home had left him with no place to sleep the night before?" "What would you do with a girl who had planned to go to college but who's finding high school so deadly she doesn't think she can take another year of it?"

The questions were not veiled or diplomatic, but what was asked was quite pertinent to deciding whether a new teacher fit into a school's culture. The would-be student teacher decided she did not. I concurred with her judgment that she had not been prepared to deal with the challenges posed: She had received little help with how to design curriculum, and I suspect she wasn't fully clear herself on the logical justification for the importance of her discipline—or the importance of school and college, for that matter. Nor did she have a sufficiently detailed understanding of adolescents to be able to respond to hypothetical questions about how to motivate, help, and guide them. The required course work in Adolescent Psychology had yielded her some information, but she had not figured out how to apply what she knew. She could only try to draw on her own not-too-remote adolescent history.

This prospective student teacher's experience, plus what we have seen about schools of choice, suggest some important specifics for preparing teachers for such schools. Before considering these specifics, some introductory comments may be in order with respect to specialization within initial or preservice teacher education. Certainly there should be some commonalities in the preparation of teachers for all kinds of schools and at all grade levels. In addition to knowing the content they will teach, all need to know something about the school as an institution, about learning, about human growth and development, about the nature of curriculum, and about how to teach data, concepts, and dispositions, as well as how to contribute to students' cognitive, personal, and social growth. While obviously there are differences in the ways these categories ought to be filled in for prospective elementary and prospective secondary teachers, there is good reason for retaining some commonality where possible. The preservation of commonality ought, similarly, to be a concern when we consider the instruction of students within schools of choice. An important operating principle of such schools ought to be that while offering some specialized features, none should circumscribe the chooser's future choices. So far as possible, the same principle ought to undergird the preparation of teachers for schools of choice: The initial decision to become a teacher in one kind of alternative should not close off a possible future choice to shift to another school (e.g., a decision to prepare for teaching in an open school should not yield such totally different preparation to preclude a later decision to shift to a social studies academy).

Clearly there are difficulties and challenges with such a keep-the-options-open principle. To the extent that schools of choice and assignment differ (and that one type of alternative school differs from another), it may prove difficult to pursue professional preparation that is sufficiently specialized yet still general. The challenge ought to remain a consideration, however, and to be handled not as a dilemma forcing an elimination of one concern or the other, but as a set of tensions indicating two needs to be addressed. Actually, I suspect that the challenge in keeping the prospective teacher's choices open will not be so much a matter of differential knowledge needs as of differential worldviews and dispositions. The traditionalist teacher, for example, has quite a different picture of the world (and set of attitudes toward it and its population) than does the free school teacher. Because one's orientation and dispositions are considerably more durable and unchanging than one's store of knowledge, perhaps the choice shifts would not be so frequent, so mutually incompatible, or so problematic as to warrant extensive concern.

But let us turn now to the specialized features of the preparation of teachers for schools of choice. First, those interested in teaching in a themed option (e.g., a Maritime magnet) need more content preparation than most baccalaureate programs provide. In the case of magnets whose themes coincide with disciplinary boundaries such as mathematics, science, or humanities schools, the additional preparation might simply be represented in more course work in the major field. But most magnet specializations do not coincide with the boundaries of academic disciplines—a feature perhaps associated with their charm—and that poses problems for teacher preparation. The preparation needs of a teacher who is to teach in a Health Services magnet are not met by a major in biology or physiology or social services or sociology, although courses in all these areas could contribute substantially. What this suggests is that cross-disciplinary majors may best and most appropriately prepare teachers for such schools. Teachers in alternative schools also need some sophistication about inter-disciplinary pursuits and their contrasts with more typical disciplinary inquiry and teaching.

Second, teachers in schools of choice need more work on the context of schools and classrooms than is commonly provided to beginning teachers. Earlier I emphasized the extensive autonomy and decision-making responsibilities of teachers in schools of choice, relative to teachers in other schools. Decision-making places a premium on understanding, ruling out a preparation that would render teaching as a set of recipes or algorithms for routinized application. Understanding is at least partially a matter of perceiving in broader context. To see something clearly and accurately is, in part, to see it in proper relation and connection to other things. Thus, prospective teachers for schools of choice need work on the context in which schools and classrooms operate. This requires work on the nature of schooling, the school's organization and function, our expectations of the school, and the way it is judged. It also requires work on those dimensions of the society at large that impinge on and have particular significance for school policy and philosophy. This means exposure to selected aspects of the social, economic, political, and philosophic context in which the school exists.

Third, teachers in schools of choice need work in the psychology of human growth and development. Broad goals are typical of such schools, which generally take an active interest in the personal and social as well as the academic development of students. Teachers need an understanding of the nature, pattern, and sequence of such development. Teachers must be in a position to accurately assess the kinds of responsibilities and opportunities for which youngsters are ready.

Fourth, alternative school teachers need an extensive working knowledge of the psychology of learning. They particularly need preparation in human motivation, and this knowledge should be drawn from the sociology as well as the psychology of eliciting interest, commitment, and effort. They also need a detailed working knowledge of diverse learning styles and strategies. Many generations of teachers appear to have been sorely misled by the generalizations about learning reported in educational psychology textbooks—despite the repetitious allusions within those volumes to "individual differences." Psychology probably has contributed more than any other social science to the prevalent assumption that there is a "one best way" of performing instructional as well as other teaching tasks, and that this one best way holds for all groups, or for youngsters "generally." But departures are not just a matter of "individual differences." A number of systematic differences among groups of students have been discovered (e.g., holistic and analytic learners; audial, visual, and kinesthetic learners; learners dependent on high structure and direction). Teachers intent on reaching all students need a working knowledge of such differences.

Fifth, teachers in schools of choice need a working knowledge of student culture. Each teacher should be familiar with the sociology of youth—the study of which, to remain current, must change annually in content. Initial preparation of this sort should equip prospective teachers both with the current specifics and with the skills and inclinations necessary to remaining up-to-date throughout one's teaching career.

Sixth, teachers in optional schools need work in the socio-cultural backgrounds of their students. Where the teacher's ethnic and socioeconomic background matches those of the students he or she will be teaching, such work need not be extensive. Indeed, a proficiency exam might suffice in lieu of course work. Where the prospective teacher's background is different from that of students, such course work can be crucial. Some of the most poignant stories of teaching failures have resulted from just such knowledge gaps. The well-meaning middle class young people of the 1960s who enraged poverty ghetto parents by trying to teach their youngsters macramé is a case in point. There have been many tragic instances where otherwise able teachers have ruined their own effectiveness by needlessly affronting ethnic or social class sensibilities without even being aware of it.

Seventh, prospective teachers for optional schools must have introductory work in curriculum. They need to understand what makes some concepts more important than others and they need to know something of the nature and sources of knowledge. They must also learn how to create meaningful, sequential curriculum designs for their students, and they must know where to look for the knowledge concepts that will illuminate their themes. For example, a teacher in a magnet school or alternative where Environment is the theme must be aware of what disciplines will inform the study, and how to locate relevant content and materials from such areas as biology, zoology, botany, soil mechanics, animal husbandry, geology, ecology, political science, and economics.

Eighth, prospective teachers for schools of choice need better, more thorough preparation in the pedagogical methods and activities that comprise instruction. It follows from what has been said that the pedagogical challenge to such teachers is extremely demanding. The teacher cannot be content with designing and crafting the "one best way" to convey given content; he or she must be prepared to devise different ways, as needed. Moreover, prospective alternative school teachers must be prepared to work in different ways with students, as well as with content: to work with individuals, and small groups, as well as with the full class group more typical of conventional instruction. Preparation must include exposure to innovative, motivating programs that have proved successful—and these programs must be examined in ways that will enable teachers to design their own.

There is at least one more crucial pedagogical methods component for teachers in optional schools: experiential learning. As earlier noted, magnet schools as well as individual alternatives make learning from experience important. But experience alone is no guarantee of learning.

Youngsters may need at least as much help on how to learn—to extract meaning—from experience as on how to learn from books and symbols. Prospective teachers must learn how to make such help available.

Ninth, teachers for schools of choice need special work in evaluation, both formative and summative. They need to understand the differences between what is quantifiably measured and that which can only be evaluated by qualitative methods. They need work that will both sensitize them to the importance of ongoing evaluation and enable them to select and devise adequate indicators of the progress they are trying to bring about. Because that progress is of wide scope and because teachers in some schools of choice will be unable to use standardized tests with their curriculum, prospective teachers cannot be simply users or consumers of evaluative measures prepared elsewhere. They must learn the essentials of evaluation and be able to apply them as a part of their own planning.

Tenth, teachers in schools of choice are often involved with the community to an extent that other teachers are not. They need work in identifying resources and in arriving at arrangements with, for example, civic agencies to accept and supervise interns, or a commercial firm to permit on-site study or shadowing, or a government official to make a presentation, or a television studio to let a class spend an afternoon there. Equipping a prospective alternative school teacher to do this need not require extensive work, but it is important.

Finally, prospective teachers in schools of choice need to learn about school climate and its generation. More specifically, they need work on how to build cohesiveness, a sense of community, within the classroom and the school. Partly a matter of holding and conveying a set of attitudes about school, education, young people—and partly a matter of learning particular instructional skills and activities—this is a key ingredient in preparing teachers for alternative schools.

The above elements constitute the essential components of teacher preparation for schools of choice. But several qualities must also be cited. The first is preparing for the extensive collaboration that marks such schools. Because conventional schools typically do little to foster collaborative endeavor—and much to discourage it—candidates must learn peer cooperation as college students if they are to be prepared to work productively with fellow teachers in optional schools. Such learning is so largely a matter of pervasive dispositions and social skills that teaching a course in it would be ridiculous. But collaborative work must be a part of *many* courses if prospective teachers are going to learn how to do it. The teacher preparation program and most, if not all, of its courses should include repeated projects, assignments, activities, and reports that involve cooperative endeavor—and the process as well as the substance of these efforts consistently must receive attention.

Finally a program preparing teachers for schools of choice must do everything possible to suffuse its own program with the attitudes and orientation it seeks to convey. It must be a user friendly program. Students within it must feel that they matter to the institution, that they are respected, and that the program will empower them to become professionals. By virtue of its certifying function, no professional school ought to take the stance appropriate to earlier education levels that *all* should be brought to success. But it can nevertheless model a personalized, caring, and supportive community, each of whose members counts. Because this particular recommendation is more amorphous than others, it is perhaps worth noting that it is not just a call for "TLC" in teachers colleges. Rather, it is a suggestion that the social organization of such institutions be modified and that bureaucratic norms and values be replaced.

A concluding note might be helpful on how these several elements and qualities can be assembled in a teacher preparation program. I think they could occur within the same time frame projected for other proposals, preferably a five-year program that would culminate in a liberal arts baccalaureate and a masters degree in teaching. The professional part of the program would extend over several years, ideally three years. Much of the preparation I have called for is of a liberal arts nature (e.g., the work on subject-matter, on the context of schools, on human growth and development, on learning, on youth culture, on the socio-cultural attributes of ethnic groups). There is every reason to view such pursuits as liberalizing and to consider them as much a part of general as of professional education for the prospective teacher. They will almost surely need, however, to be offered under the auspices of the teacher preparation program. The reason is not that they must be watered down, as critics allege, but that they must be assembled in ways that disciplinary bounds and administrative structures will not permit to happen elsewhere in most colleges and universities.

To cite just one example, I have recommended that both psychology and sociology need to inform the teacher's understanding of classroom events. But if the relevant knowledge is pursued in liberal arts courses, the prospective teacher is left to sift, borrow, lift, and assemble as needed—a challenge too epistemologically intricate to leave to those least able to accomplish it. Yet the necessity of performing such an amalgamation was underscored again recently by Seymour Sarason (1984) with his reminder that the whole course of American education in this century could have been different if Thorndike had put two or three rats in his maze instead of just one. But he didn't. And thus, for an understanding of group traits and group behavior, one must supplement psychology.

If prospective teachers are to make important choices about the optional schools they prefer, an opportunity to observe schools must begin early. Ideally it might begin as soon as there is sufficient background to enable prospective teachers to look at high school classrooms from a different perspective than they viewed them as students. Surely this should begin to happen near or by the end of a first professional course. All subsequent courses should involve relevant observation and participation sequences. Students should select the particular school in which they are to student teach and should be helped to understand the ramifications of their choices (i.e., the nature and assumptions and practices of that school's particular approach to education). Desirably, student teachers begin gradually to learn about schools by working with just one class. At this stage they are continuing, simultaneously, to work closely with college or university instructors on pedagogical methods. Thus, unlike the typical seminar arrangement that brings the student teacher back to campus infrequently (only once a week or less), faculty are in close touch with student teachers and are helping them select and devise the classroom approaches and activities they will be carrying out. Such a scheduling arrangement not only provides tyros with much needed help, it also enables them to see and experience the connections between what they too often perceive as the two unconnectable worlds of "theory" and "practice."

Emphasis must be added about the importance of the practice teaching phase. It is here that the knowledge can be brought to bear and the skills sharpened. It is also here that the socialization of the future teacher really begins. It follows from what we have said that this experience should come near the end of the preparation program, when the prospective teacher is in a position to understand classrooms and their demands quite differently, and that the assignment should be to a school of choice selected by the prospective student teacher. The candidate should have spent some time in the school prior to application. While it was suggested above that practice teachers begin slowly, perhaps with just a single class, it is also important that at some time during the total experience they reach full exposure—that they go through full teaching days that make demands comparable to those experienced by regular teachers. During the student teaching experience, they also should participate in some of the non-classroom activities of teachers within the school, particularly in planning with colleagues and in other collaborative ventures.

I am convinced that if all teachers were educated in the ways I have indicated, we would have teachers who were far more effective, productive, professionally dedicated, and satisfied than we are entitled to hope for now. Furthermore, we would have teachers with the inclination and wherewithal to keep on improving their own practice. By preparing teachers for the collaboration and colleagueship of schools of choice, we will have prepared them to go on learning. We also will have set in place the best mechanism known, so far, for making schools self-renewing systems.

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VII

Defining the Excellent Teacher Preparation Program

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Specifying necessary resources depends on how one defines an excellent teacher preparation program, which in turn depends on how one defines the proper role of beginning teachers, the skills and knowledge they are to have, and the results they are to obtain with their pupils. Beginning teachers should be prepared to serve as genuine professionals, not just as technicians, and should receive an education considerably deeper, broader, and more rigorous than is now customary. Our current system of school staffing certainly demands well educated teachers who are prepared to perform multiple roles with little assistance or supervision. Our overriding goal is to prepare teachers who, first, do no harm to children and who, second, promote considerable growth among all of their pupils.

The general components of good teacher preparation programs are well known, if not always well implemented. First, future teachers need a broad general education to enable them to serve as models of well educated people. Second, prospective teachers need both breadth and depth in one or more academic disciplines. They should be learned well beyond their future pupils and should possess, not just the facts of a discipline, but also an understanding of how one thinks and learns in the various disciplines, and of how one area of inquiry relates to and differs from others.

These first two components of teacher preparation usually are not the direct responsibility of the education department. If a teacher is deficient in basic academic skills, general education, or subject matter competence, we must look outside the education unit for the main source of the problem. Obviously, the first resource an excellent teacher preparation program must have is a total institutional context of high quality. All the resources imaginable for teacher education will not compensate for a college or university setting that is shoddy.

At present, some people are calling for prospective teachers to have more coursework in academic disciplines and less in education. The assumption is that more subject matter will cure what ails some teachers. Three observations are pertinent to this issue:

1. The most serious problems with the subject matter component for prospective teachers are not its length, but rather its lack of rigor and a preponderance of fragmented, fact-oriented courses without any attempt to present the course content as a coherent whole somehow relevant to an educated life.
2. The fact that some teacher education programs do need more work in the discipline(s) does not mean that the professional education component is any less important or that it should be diminished. Later, I will examine "time" as a critical resource for teacher preparation.
3. When teachers fail in the classroom, almost always their basic problem is pedagogical, not mastery of subject matter. To a considerable extent, good teachers, teachers who know how to teach, can and will compensate for some weakness in subject matter, whereas subject matter experts will fail if they cannot gain and hold children's attention and communicate their subject matter.

Coursework in the academic disciplines definitely does not teach prospective teachers what to teach their future pupils. If college material were appropriate for direct transmission to school children, then it would be taught in K–12 schools. The purpose of such coursework is, first, to enable the educator, as Dewey (1916) noted:

> [T]o perceive the meaning of the seeming impulsive and aimless reactions of the young, and to provide the stimuli needed to direct them so that they will amount to something. The more the educator knows of music the more he can perceive the possibilities of the inchoate musical impulses of a child. (p. 190)

Subject matter mastery also frees the teacher to attend to pupils: "When engaged in the direct act of teaching, the instructor needs to have subject matter at his fingers' ends; his attention should be upon the attitude and response of the pupil" (Dewey, 1916, p. 191).

In addition to a broad general education and breadth and depth in one or more academic disciplines, the third component of teacher preparation is professional education—the total set of coursework and practical experiences that prepares the person who has been liberally educated and who has mastered one or more academic disciplines to actually teach children. Professional education includes a) those "foundational" studies that provide the necessary background about children, learning, teaching, and schools for informed practice as a teacher and b) practical studies in planning, implementing, and evaluating instruction. A list of exactly what should be included in the professional education component would be quite long, but essentially the curriculum should provide the graduate with a high level of competence in the specific skills of teaching and with a large fund of information about the total context of teaching as a guide for decision making.

Clearly, an excellent teacher preparation program should be rich and full of both exciting ideas and realistic experiences. An excellent program demands the careful integration of both campus-based and field-based instruction over a substantial amount of time.

Instruction for future teachers that is solely or predominantly campus based is divorced from the reality of school rooms and is necessarily theoretical and/or admonitory. There is nothing wrong with theory *per se*. Indeed, all teaching ought to be based on some theory of what one is doing and why. Admonition—telling future teachers what their obligations will be and what they should not do—is also necessary. However, theory and admonition alone cannot convey how precepts are to be translated into practice. A good analogy would be to tell prospective surgeons how an appendectomy is to be done, require them to read about the operation, perhaps even show slides, but never require them to observe actual appendectomies, to practice isolated subskills, to assist surgeons, or, finally, to perform the operation themselves under supervision.

On the other hand, field-based instruction exclusive of theory, which a few people have advocated, is also deficient. This is the apprenticeship model, which assumes that teaching is a clearly defined and delimited technical craft learnable by imitating a practitioner. Teaching is not merely a technical craft. In fact, one of the most pervasive and persistent characteristics of teaching is its variability. Groups of pupils and individual pupils differ greatly from each other; and, as a child develops, he or she will differ from an earlier self. The social contexts of schooling vary, and within the classroom the events teachers must respond to and the variables they must control are relatively unpredictable. To set only one model or a few models before prospective teachers for them to imitate in a low level, rote fashion would produce teachers who are limited in their repertoire of behaviors. Again, the medical analogy is illuminating. Imagine a system whereby one became a physician simply by serving under a licensed physician for several years.

Teacher education, then, must combine both theory and practice, both admonition and example, both ideas and realistic experience in an integrated, carefully planned curriculum. Furthermore, as the future teacher progresses, the professional education curriculum must change accordingly.

In the early stage of the program, teacher education must concentrate on helping the college student begin to view schooling from the other side of the desk. As Lortie (1975) noted, everyone who has been through K–12 schooling thinks he or she knows how it should be done and has some very firm—and often mistaken or inadequate—ideas about what teaching involves. Beginning education students must learn to study children, teachers, teaching, and schools. They must also go into schools to observe real manifestations of the facts and concepts they have learned in the college classroom.

The early stage also requires preservice students and teacher educators to assess the students' career decisions. Some students who are initially attracted to teaching will be unsuitable for the profession. Some love children but do not have the emotional stamina and personal characteristics to handle 20 wiggly first graders or 30 cantankerous ninth graders. Some do not have the intellectual caliber to teach. Some do not have the self-discipline and orderliness to organize a program of instruction. And some have wandered into the wrong program simply because they can not think what else to do with themselves.

In the middle stage, teacher education students should continue their study of teaching and begin to practice isolated skills in small steps, with ample opportunity for relearning and continued practice to enable a high level of mastery. In this stage, the prospective teacher should learn that there are specific, discreet skills in teaching and be given opportunities to use them in clinical and field situations.

In the final stage, the prospective teacher should learn to integrate the specific concepts and skills of teaching and should gradually assume the full teaching role. Traditionally, student teaching has been intended to fulfill this purpose; however, the experiences of many beginning teachers indicate that the traditional student teaching experience is probably too short to provide an adequate induction into the profession (Johnston & Ryan, 1983).

SPECIFYING THE RESOURCES

If we accept the general model of excellence in teacher education programs as described here, then the need for certain resources follows necessarily.

Faculty and Staff

The first and most important resource is faculty and staff. In terms of both quality and number, the people directly responsible for educating future teachers are critical. Done properly, teacher education is labor-intensive. Technology can be useful in teacher preparation, but it cannot replace the close contact needed between teacher educators, who understand the art and science of teaching and prospective teachers, who are just learning how to become students of teaching.

Funding formulas for teacher education typically assume that it should operate primarily on a format similar to that found in English, mathematics, and history. From the perspective of some administrators, this format is attractive because it is economical. One professor can lecture to 30, 100, or even 300 students in a hall; give multiple-choice, machine-scored examinations; and supposedly accomplish the business of higher education at low cost. Better yet, the professor can be replaced by an inexpensive teaching assistant, instructor, or part-timer.

Teacher educators constantly struggle against the notion that their courses can and should be taught as academic disciplines are taught. One example of the special needs of teacher education is the time-consuming supervision of field experience students. Groups of education students cannot be placed in one school. Instead, each student needs an individual classroom placement to maintain the appropriateness and realism of the experiences and to prevent overburdening classroom teachers and schools. Also, supervisors have considerable demands on their time for travel, observation, and conferences with each student throughout the duration of the field experience. As it is now, three options are available to teacher educators to make field experiences feasible: skimp on supervision, overburden professors with supervisory duties, or farm supervision out to graduate students and other subprofessionals.

Early field experience, if it is managed well, also requires considerable administrative time. If an institution has more than a handful of education students, field experience becomes a tremendous logistical task. Someone must: identify specific kinds of placements and match them to students and courses; keep schools, teachers, and education students informed of dates, times, purposes, activities, and expectations; maintain good public relations with multiple schools and school districts; deal with major problems in student performance; monitor students' attendance; record evaluations of students' performance and document their participation; arrange transportation; and coordinate the design and regular evaluation of the field experience component. Obviously, a teacher education program committed to field experience for its students must be able to make a large investment in supervisory, staff, and administrative time.

Given the nature of teacher education, a more appropriate approach to staffing would permit a coaching relationship, such as we find in drama, sports, and clinical medicine. Both campus-based and field-based components of teacher education call for a close, intense relationship between a skilled teacher educator and a few students. Some aspects of the excellent program can be conveyed in conventional classes to larger groups of students. However, the main business of learning to teach requires a skilled teacher educator who can and is permitted by the situation to *coach*—to demonstrate, design practice activities, observe students, critique and reteach, observe again, and so forth, until each capable student masters the skills.

An excellent teacher preparation program needs high quality faculty and staff, as well as sufficient numbers. Teacher education faculty, in order to prepare excellent teachers, must possess a number of general attributes. First, they must be highly competent intellectually and well educated in appropriate academic disciplines and in specific areas of pedagogy directly related to their instructional responsibilities. Second, they must themselves have been experienced, highly successful teachers of children in a setting like that for which they are preparing new teachers. Finally, they must be capable of relating the knowledge base of teaching and teacher education to their instruction of future teachers. In sum, faculty who are directly responsible for teacher education should come from the very best who enter the teaching profession—excellent teachers who also possess the highest intellectual and personal skills and the commitment to obtain a high level of formal expertise in pedagogy.

Unfortunately, teacher education as a career has inherited recruitment problems parallel to those of school teaching—low status, low salary, and often poor working conditions. An excellent teacher preparation program needs the financial and environmental resources to attract, retain, and reward top quality faculty and staff.

Time

The second most important resource for teacher education is time. On the average, 20 percent of the total coursework required of a secondary teacher and 40 percent of that required of an elementary teacher consist of professional studies (Haberman & Stinnett, 1973). Conversely, for 60 to 80 percent of their education, students are not recognized in any significant way as professionals in training and have no contact with the teacher education unit (Clark & Marker, 1975).

Elementary majors average 37.5 semester hours in professional studies and 11.8 hours in clinical studies; secondary majors average 25.4 semester hours in professional studies and 10.7 hours in clinical studies (Lewin and Associates, 1977). Furthermore, under the certification requirements of some states, much skimpier programs are possible. Dumas and Weible (1983) and Feistritzer (1983) reported that the states' standards for professional studies for elementary teachers were highly variable in both amount and nature. Burks (1984) listed 18 states as still accepting 18 or fewer credit hours in professional education coursework for secondary certification, and a few still accept small amounts of credit hours for even elementary certification.

Such limited time cannot begin to contain a fully professional preservice education for teachers. A number of individuals and groups (e.g., American Association of Colleges for Teacher Education, 1983; Cremin, 1978; Denemark & Nutter, 1980; Smith, 1980) have advocated extending the preparation period for beginning teachers beyond the traditional four years. Some individual institutions have extended their programs beyond four years, and a few states (e.g., Oklahoma, Florida) have legislated a fifth-year internship during which college and school personnel assist the beginning teacher in learning the situation-specific skills of teaching.

Students

Students are a critical resource for teacher education, and teacher educators long have been too lax in standards for admission to and graduation from teacher education programs. Often, our lack of selectivity in whom we admit has been ascribed to "low standards" or "lack of academic respectability." A more likely cause is that as a group we are so strongly oriented to nurturing and to recognizing our students' potential for growth and so resistant to pronouncing an individual a "failure" that we sometimes lose sight of our obligations to the children our students will eventually teach. Quite simply, we need to strengthen both academic and performance criteria for students in our programs to ensure that our graduates are not merely "acceptable," but "excellent" teachers. To our credit, clear progress has been made in this area in recent years (Laman & Reeves, 1983). The dilemma is this: If we raise our standards for admission and graduation, we will have fewer students; and, if the funding formulas are not changed, we will have fewer resources, including fewer faculty. Reductions in faculty, particularly at small and medium-sized institutions, represent more than what simple faculty/student ratios reflect—they represent an erosion of the diversity of a faculty, regardless of how many students are taught, and a dwindling of its intellectual and experiential mass.

Schools

In order to conduct a comprehensive field experience program, a teacher preparation institution must have ready access to a wide variety of schools—

traditional, progressive, and alternative schools; schools that serve the full range of types, ages, and special needs of pupils; and schools located in rural, urban, and suburban locations. The program also needs access to excellent teachers within those schools. Obviously, few institutions can find all of these resources in their immediate area. In addition, a teacher education program of any size will impact too heavily on local schools. In terms of resources, the excellent teacher preparation program needs funds and personnel to establish and maintain an extensive network of cooperating schools, to provide students with varied experiences in those schools, and to adequately compensate schools and teachers for the considerable voluntary contribution they make to our professional enterprise.

Physical Resources

An excellent teacher education program also needs some specific, and expensive, physical resources other than the traditional college classroom and the school classroom. University administrators, governing bodies, and the general public assume that the chemistry department needs laboratories and equipment, that physics professors need sensitive measuring devices and particle accelerators, and that the experimental psychologists need their rat rooms and laboratories. However, these same groups may not realize what specialized resources teacher education requires.

First, prospective teachers and teacher educators should have access to curricular and instructional materials of all types, in all subject areas, and for all types of students—to include textbooks, workbooks, slides, films and filmstrips, audio recordings and tapes, tests and testing equipment, children's and young adults' literature and magazines, teaching implements, curriculum guides, packaged curricular materials and kits, gym equipment, art supplies, musical instruments, and educational toys. The selection should be wide and current, well cataloged, and maintained by specialized staff. Teacher educators should not need to scrounge for free materials or lend their own possessions, as many now do.

Second, teacher education students need a comprehensive media center that includes modern technology, including computers, and a good selection of equipment for preparing materials. Education students need access to and instruction in media—both how to use it and how to use it to enhance instruction. Further, the media center requires staff skilled in media instruction and the necessary financial support for maintenance, repair, and replacement of hardware and software.

Third, an excellent teacher preparation program requires specialized clinical facilities to provide intense, controlled, closely supervised experiences not feasible in field sites. Examples would include testing/tutoring rooms with one-way observation windows and facilities for videotaping;

demonstration classrooms and laboratories; facilities and equipment for such specialized functions as counseling; foreign language laboratories; facilities for instruction in music, art, and physical education (regular and adapted); and, laboratories for speech and hearing therapy, and other therapeutic purposes. At present, such facilities often are nonexistent, small and crowded, devoted primarily to other units and functions of the institution, or constantly commandeered for other purposes.

Fourth, a teacher education program needs substantial library resources for both students and faculty—books, periodicals, indexes and other reference works, document retrieval services, etc.—and competent librarians trained and interested in the field of education.

Finally, a teacher education program requires photocopying and printing of instructional materials, secretarial and clerical services, and an abundant supply of such mundane things as paper and paper clips. Any organization, if it is to perform its tasks well and promptly, needs a reasonable level of flexibility and expeditiousness in its routine operations.

All of these physical resources are necessary, along with trained staff to organize and maintain collections and facilities and to keep the resources available at hours convenient for students and faculty. Furthermore, any initial investment for physical resources must be followed by continuing funding for maintenance, repair, and updating.

HOW MUCH MORE?

If an excellent teacher preparation program requires specific resources and if many, perhaps almost all, existing programs are not adequately supported, the question then becomes, "How much more support do existing teacher preparation programs need?" The answer will vary by institution. However, there are three negative funding situations now found in teacher education and there is general evidence concerning the scope of current underfunding. The three negative scenarios described below are found in only *some* institutions that prepare teachers.

The Starving Institution

Teacher education programs are found in approximately 1,200 institutions of higher education in this country (Feistritzer, 1983). Given our country's recent economic problems and the decline in the population of eighteen-year-olds, a fair number of these institutions are starving. Some historically mediocre institutions have declined into fiscal and intellectual poverty, and some historically low quality institutions have become even poorer. Teacher education in many of these underfunded institutions is beyond any reasonable hope of improvement, especially because the total institutional environment is of such low quality. To put it bluntly, these institutions should be put out of the business of preparing teachers.

Most of these starving institutions are small. Clearly, some small colleges have a special commitment to teacher education and regard it as a central part of their mission. Further, when a small institution limits the number of teacher education programs and carefully matches its efforts to its available faculty and financial resources, the result can be high-quality graduates (Rosen et al., 1983). Unfortunately not all small institutions are able to do this. They try to do too much with too little.

The Research-Oriented Institution

In some of the larger, research-oriented institutions, teacher education programs are actually ignored and underfunded by the education unit itself. When the education unit overemphasizes other more "academically respectable" endeavors such as research, graduate education, and funded projects, undergraduate teacher education then serves primarily to provide money for the more "valued" pursuits, employment for graduate assistants, and, perhaps, research subjects for some studies. In their defense, the research-oriented colleges of education that ignore their teacher preparation programs often have been forced into this stance by the total institution's value system and the way it allocates rewards.

These institutions should get out of the business of preparing teachers if they cannot change their engrained attitudes and practices. However, research-oriented institutions typically do have the potential, or the critical mass, to offer excellent programs with the reallocation and addition of resources. Research productivity and graduate education are important in themselves and may help create a climate that enriches the preparation of future teachers (Raths & Ruchkin, 1984). Institutions that are intended to fulfill a broad, multifaceted mission related to the teaching profession should not be forced to slight one role for another because of inadequate resources.

The Inhospitable Institutions

The final negative scenario is the institution that is fundamentally not hospitable to teacher education. In these institutions, the attitudes of central administrators and key groups of faculty toward teacher education range from lukewarm to hostile. They regard teacher education as an embarrassment, a peripheral activity, perhaps a necessary nuisance, and certainly not something on which to spend much money (Monahan et al., 1984). Such institutions need to go out of the teacher education business. Many of these institutions would probably change their attitudes if forced to choose between losing their teacher education programs and supporting them adequately, particularly if the choice caused them to assess what teacher education programs contribute in both practical and philosophical terms to the university.

An Informal Case Study

In an effort to form a better picture of what additional financial resources teacher education programs need to become excellent, I have studied the budgets for undergraduate teacher education at three Ohio institutions—one large college of education with a 35/65 ratio between its graduate/undergraduate efforts in terms of staffing, one medium-sized college of education with a 25/75 ratio between its graduate/undergraduate efforts, and one small undergraduate department of education in a small, denominational liberal arts college. I chose institutions in Ohio because of a unique funding situation: The Ohio Department of Education in 1980, implemented new standards for teacher education and obtained funds, known as Project 419 monies, to give directly to teacher education units to help defray the cost of implementing and maintaining the new standards.

Teacher education programs in these three institutions are still not adequately funded. However, I believe that their patterns of spending both general fund and Project 419 monies support the following tentative statements about the extent and nature of underfunding in teacher education.

First, the greatest need in terms of its absolute cost is for additional personnel. The three institutions supplemented their various categories of personnel from 13% to 35% above their regular budgetary allocation. Personnel hired (completely or partially) with the "extra" state funds included a human relations expert; a person to organize and coordinate early field experience placements; an elementary education professor specializing in mathematics education; a specialist in emotional disorders for special education; extra supervisors to lower the ratio of student teachers per supervisor; a specialist in secondary content field reading; an educational media center coordinator; extra secretaries to keep student records and assist faculty; workstudy students to run photocopying and printing services; and part-time faculty to replace faculty members on sick leave, to offer extra class sections and reduce class size, and to fill a precise need in adolescent growth and development.

Each education unit indicated that without additional funds from the state its genuine and pressing needs for personnel would have gone unmet. In fact, the institutions spent less of the extra funds in personnel than they needed to because they were unsure of future funds. The spending patterns showed that even the larger institutions were lacking instructional personnel in basic areas such as mathematics education and student teaching. Based on interviews at these and other institutions, I would estimate that the typical teacher education program needs, at the minimum, about a 30% increase in personnel support, with larger increases (35–40%) for instructional and clerical personnel. Furthermore, I believe my estimates are fiscally conservative and *minimal* in terms of achieving the program quality needed in teacher education.

Second, the regular operating funds for teacher education programs—supplies, instructional materials, equipment, travel and transportation, capital outlay—are scandalously low. Throughout the recent economic problems, most institutions have tried to reduce expenses as much as possible in nonpersonnel areas. As a result, a salary dollar for teacher education may have as little as three cents behind it in operating funds. One of the education units I studied supplemented its instructional materials fund by an average of 444% over three years. Without supplemental funds and given other fixed operating expenses, that unit's purchases of materials would have been meagre. Teacher education programs, to achieve excellence, typically need at least a 60% increase in general operating expenses. Again, the estimate is a conservative one.

Higher education, in general, has suffered a loss of resources in recent years, but teacher education, which was not well supported to begin with, has lost more than its proportional share (Peseau & Orr, 1980). Monahan et al. (1984) visited and surveyed a number of teacher education institutions in 1982 and 1983. They concluded:

> [T]here are widespread resource constraints [in teacher education] and . . . these are very serious and . . . in a large number of cases Schools and Colleges of Education have taken a more serious blow in regard to resource cutbacks than have most other academic units in such institutions. Although a number of Education units in universities have encountered reductions in enrollment, in some cases especially so at the undergraduate level, it is our considered judgement that the magnitude of resource cuts has been substantially greater than the enrollment deterioration would otherwise warrant. (p. 22)

THE BOTTOM LINE

The bottom line is that excellent teacher education programs require specific resources and considerably more resources than they now have. Educators often use a medical analogy to make professional comparisons. Sometimes such an analogy does not hold because teachers and physicians are quite different. However, the treatment of medical personnel does serve to reveal a marked discrepancy between the espoused and actual values of our society. The veneration and privilege (and hard cash) our society has given the medical profession, especially physicians, are a natural result of our individual desires to live long and be healthy. My question is, what value by comparison have we put on our children's minds, on the teachers who will develop those minds, and on education for those teachers? Our society's official, public sentiments are that the education of future teachers is vitally important. Our collective actions as a society allocating its resources have revealed the lie in our official pronouncements.

Surely ignorance and misinformation are serious ailments, figuratively and sometimes literally fatal. Surely the teachers we trust with children's lives and minds deserve more and better education than we as a society have given them. And surely excellent teacher education programs will return a thousandfold to our society what we must invest in them.

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Section Three

Mechanisms for Creating Quality Teacher Education

The five chapters that make up this section focus on the dynamics of teacher professionalism, certification, and practice. Considered as a whole, the chapters establish a direction for how teacher education is viewed by teacher educators and a variety of significant others. Their views have important implications for the practice of teacher education. As Denemark (1985) observes, "how we think about things often influences their ultimate reality. . . . Ideals have a way of conditioning reality just as reality often shapes ideals" (p. 46).

The ideals to which Denemark alludes include creating within the education culture the conditions for professional teacher preparation practices. The first chapter of this section deals with how such conditions might be achieved. Robinson argues that teacher education has been experiencing steady improvement; teachers are better prepared than they were a decade ago. But, more changes are needed. Teachers need to have greater decision-making power, and they need more autonomy. Improving teacher preparation necessitates ameliorating the state of public and private education and involving teachers in the change process. To use Boyer's (1983) terms, "whatever is wrong with American public schools, it cannot be fixed without the help of those teachers already in the classroom" (p. 149). Other requirements include: building a school climate where student learning is characterized by mastery of what is taught; evaluating teacher performance to engender teacher growth and development; creating administrative instructional leadership; and paying teacher salaries that are equitable and that match levels of training and responsibility.

Robinson views professionalism in holistic terms. It is not something for which a few (teacher educators or state policymakers) have responsibility. Professionalism requires collective effort and unity of purpose. It necessitates an emphasis on meeting both the definitional requisites of professional practice (i.e., a prolonged period of preparation and exposure to specialized skills and knowledge) and on dealing with the more subtle, but real, tacit dimensions of professional life such as teacher status and recognition.

How best to enhance professional practice is an issue of considerable magnitude and import. Given the hundreds of reform reports (Robinson suggests that there have been in excess of 300 national and state reports in the past couple of years), it is little wonder that there have been numerous answers given in response to the question of how to achieve professionalism in teaching. Robinson's approach is diffuse and directed toward all facets of the educational community.

The responses of Galambos (Chapter 8), Leach (Chapter 9), and Wallace (Chapter 10) are more singular in approach. Each author addresses some set of specific problems associated, directly or indirectly, with certification. Galambos reviews the body of research and findings on teacher competency testing. She deals with a variety of highly relevant questions: Do certification tests affect the quality of hired teachers? Is it too late to test at the time of certification? What is the effect of testing on minority populations? And, should testing be required for re-certification? Her emphasis is on describing the state-of-the-art, not on prescribing how teacher educators should respond.

Leach and Solomon outline what has happened since 1975 in Georgia to tighten and improve certification processes. The Teacher Performance Assessment Instruments (TPAI) have been described in a number of national publications. And the Georgia plan has set a tone, at least in an indirect sense, for much of what is occurring throughout the country. Many states and individual school districts now approach the evaluation of new teachers by using systems similar to the TPAI. The prescription of competencies and competency indicators is becoming a common model for teacher assessment.

Leach and Solomon also touch on the limitations of the TPAI process. The TPAI instruments appear to have more efficacy with new teachers than with experienced professionals, which is evidenced in the fact that two of the TPAI instruments have never been used with experienced teachers who are involved in career ladder plans. This comes as no surprise to teacher educators who are familiar with the evaluation literature. The minimum competency approach, of which the TPAI instruments are an archetype, is intended to identify the presence or absence of certain skills. When applied to veteran or skilled teachers, such assessments are superficial. What is needed at more advanced levels is a qualitative description of the teacher's performance and a phenomenological account of the teacher's impact on students. Such assessments are both costly and complex. The reductionism of instrumentation may be right for tyros, but it is wrong for veteran teachers working through more artistic aspects of the teaching process.

In order for the beginning teacher to become effective, guidance and assistance is needed from a wide variety of individuals, the most important of whom is the school administrator. The literature of the past decade is replete with references to the principal as instructional leader. As an instructional leader, the principal must be prepared to make instructional decisions and to understand how the research literature can be integrated into the realities of practice. It is this integration process that Wallace describes.

Whereas Leach and Solomon are concerned with the development of new teachers, Wallace addresses procedures for helping practicing teachers perform more effectively in the classroom. Providing both a review of the relevant literature and a case study of the Pittsburgh City Schools, Wallace documents the steps taken in Pittsburgh to enhance personnel evaluation policies and teacher instructional expertise.

The final chapter in this section deals with the issue of quality control in teacher education. Since the early 1950s, the standards of NASDTEC and NCATE have been used for the approval and accreditation of teacher education programs. Behling, in Chapter 10, attempts to document the high quality of those persons working in state departments of education and to describe how state approval procedures have enhanced teacher preparation practices. That the former is true is not surprising, but the latter point is a debatable one. To argue, as Behling does, that on-site evaluation processes have enhanced the quality of graduates, may be an oversimplification. Quality cannot and is not mandated by states or legislated by policymakers. Quality manifests itself when people are committed to an idea, and commitment is evidenced when there is a belief in the soundness of practices or processes (or standards) and, concomitantly, when there is congruence between those practices and the needs of the various individual learners. State evaluators may be able to assess some dimensions of a program (such as number of library volumes, variety of field experiences), but they will seldom, at least given present evaluation schemes and instrumentation, be able to determine the more intangible qualities that constitute the heart of teacher education.

Similar concerns with respect to the question of quality could be expressed about the NCATE reviews. Of even greater significance, however, is the fact the NCATE accreditation does not appear to achieve one of its most important goals: the transfer of teacher certification from one state to another (Raths, Zych, and Wojtaszek-Healy, 1985). Despite all of the efforts during the middle 1970s of NASDTEC to establish a meaningful reciprocity system, it appears that the specialized requirements of individual states may preclude the development of a common certification process. One significant challenge of the future will certainly be the creation of a system of certification that enables the "common" knowledge base of the profession to become a foundation for a relatively uniform system of certification.

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VIII

Toward A More Desirable Profession

Sharon P. Robinson

National Education Association

A profession is founded on the assumption that its members know what the world is like. Because of this, members of a profession come to share a particular view of the world. A profession develops its own paradigms—models or patterns—for dealing with the problems its practitioners must face.

Another tenet of "professionography" is that a profession tends to become rigid with age. This condition is reflected in a dictionary definition of *professionalism:* "extreme competence in an occupation or pursuit sometimes marked by absence of originality." Some social scientists have observed that for all their apparent vitality and receptivity to new ideas, the American professions are enormously conservative.

One reason for this conservatism may be that a profession's established paradigm controls the criteria for choosing the problems with which it will concern itself. Such a paradigm, therefore, can insulate a profession from those socially important problems that cannot be stated in terms of the conceptual and instrumental tools the existing professional paradigm supplies.

In fact, a scientific revolution has been described by Thomas S. Kuhn in his book, *The Structure of Scientific Revolutions* (Kuhn, 1970), as the replacement of one paradigm by another. Examples of this can be seen in well-known episodes of scientific development that have been labeled revolutions and associated with such names as Copernicus, Newton, and Einstein. Each of these important events necessitated the rejection of one time-honored scientific theory in favor of another.

Each event—and according to Kuhn, there have been many of them—"produced a consequent shift in the problems available for scientific scrutiny and in the standards by which the profession determined what should count as an admissible problem or as a legitimate problem-solution" (p. 14). Such changes, says Kuhn, "are the defining characteristics of scientific revolutions" (p. 17).

How clearly can this phenomenon be seen in teacher education programs, in our professional literature, and in the changing fashions of educational research?

Perhaps we should face up to another set of questions. In modern times, has the teaching profession experienced what could be described as a revolution in terms of theory and practice? And, if such revolution were to occur, would we in the profession recognize it as such? The question might be restated this way: Can the teaching profession reform itself?

If professional self-reformation is possible—*and I think it is*—then it must be based on self-understanding and self-examination: a self-examination that is clinical, objective, and multidimensional.

We must learn to see ourselves as others see us. We must also find new ways of conceptualizing our mission—using old models as well as with new ones. Model theory today tends to merge with metaphor theory to the extent that a metaphor may be seen as a model for changing our way of looking at things, of perceiving the world. All of us who teach must understand that it is only through metaphors that we can deal with the future.

One useful view of the profession came from Bob Howsam (Howsam, 1982). He described three closely related but separate functional units characteristic of several professions in the area of human services:

1. The institutions that bring together clients and practitioners for the performance of professional services, i.e., schools, hospitals, courts.
2. The institutions that make the professional services available, i.e., teaching profession, medical profession, legal profession.
3. The institutions that prepare practitioners and have primary responsibility for research and development, i.e., colleges of education, law, and medicine.

In the Howsam model, each of the three institutions has overlapping but more or less clear allocations of responsibility. In a series of understatements, Howsam points out that the three sectors of the profession "proceed from different assumptions and are far from agreement" (p. 8). He tells us—with tongue in cheek, I presume—that "collaboration and mutual trust are not pervasive" (p. 8).

One value of the Howsam model is that it can serve as a special viewfinder (a prism, if not a kaleidoscope) or device that makes it possible for us to view, from different perspectives within the profession, the growing number of recommendations for school reform.

Howsam also tells us that in his triumvirate of professional loci "the status of professional schools largely reflects the status of the profession" (p. 9). Within the Howsam triumvirate of schools, teachers, and teacher education, we find, in reality, close interrelationships defined by many bonds of common concern. More often than not, then, enlightened self-interest increasingly indicates mutual support and cooperation among these groups.

It may be for this reason that teachers anticipated the present ground swell of educational reform. For example, ten months before the National Commission on Excellence in Education issued its report, the National Education Association (NEA) published a detailed blueprint for reform of teacher education. In this report (*Excellence In Our Schools, Teacher Education: An Action Plan*, 1982) the NEA called for substantial emphasis on the liberal arts, a major in an academic discipline, and rigorous admission and graduation requirements for the professional program. The NEA also called for a professional curriculum relevant to the world of teaching and learning and for stringent measures of accountability.

Three generic functions were identified: facilitating learning, managing the classroom, and making professional decisions. Five "families of standards" were developed against which professional programs could be judged. The NEA has, of course, discussed all of this with AACTE and with other groups within the teacher education community.

The NEA's proposals for fundamental reform can make a significant difference in the quality of schooling. Obviously, we at the NEA feel that the teacher is central to any discussion of quality education. For now, I simply want to explain our involvement in, and our commitment to, improving teacher education programs. And, incidentally, we are of the opinion that teacher education is already getting better, despite the current demographics of despair.

To put it another way: teacher education, in spite of Ms. Feistritzer's (1984) comments to the contrary, is improving markedly. We used to complain that we prepared teachers for a world that did not exist. Let me stiffen that criticism: We are now preparing teachers for a world of professional practice that *should not* exist. Teaching and learning conditions that exist in schools today do not serve anyone well—taxpayers, legislators, school board members, administrators, parents, and especially students. These sad conditions undermine our profession and our entire enterprise by thoroughly frustrating productivity and thereby credibility. None of us escapes indictment.

The Conditions of Practice

Five conditions require our immediate consideration and action. Teachers tell us that unless some action is taken on these matters, all of the federal and state efforts to reform schooling are doomed to failure.

Teacher Decision-Making

The first of these teaching and learning conditions, and perhaps the most important, has to do with decision-making. There simply has got to be considerably greater autonomy for the faculty of the local school. Ernest Boyer (1983) tells us that "whatever is wrong with American public schools, it cannot be fixed without the help of those teachers already in the classroom" (p. 149).

Faculty autonomy will be required *both* as a part of the needed reform and, even more important, as an essential characteristic of the "new schools"—the schools that will be a result of the coming pedagogical renaissance to be brought about by *reasonable adaptation* of the research on effective schools and on effective teaching.

Sizer (1984) says it best when he points out that some abysmal teaching flows—not always from poor teachers—but from "the conditions of work"—giving rise to Horace's Compromise. Reversing this direction will be difficult, but Sizer also observes that, "As effective teaching absolutely requires substantial autonomy, the decentralizing of substantial authority to the persons close to the students is essential" (p. 196).

Evidence on the effectiveness of decentralized schools is considerable. A recent review of the literature (Purkey and Smith, 1982) reports that:

> [I]n attempting to build more effective schools we must abandon our reliance on facile solutions and the assumption that fundamental change can be brought about from the top down. Instead, a more promising notion rests on the conception of schools as functioning social systems with distinctive cultures in which the improvement effort is directed toward incremental long-term cultural change. (p. 17)

"Downtown" continues to set goals, but decisions over how teacher/student time is organized, the materials and approaches used, and the way staff is deployed must be at the school building level.

New Work Models

A second work condition for teachers will involve a new model—a new metaphor, if you will—of the school building as a kind of clinic, laboratory, R and D Center; a kind of think tank that houses a group of knowledge workers; as a place where the primary purpose is learning; a place where purpose and goals are clearly understood by everyone: students, parents, teachers, support staff, as well as administrators; a place where everyone has high expectations and respect for students, and where students respect themselves and consequently raise their own performance standards.

In such an environment, we find a culture based on common purpose, self-respect, and caring—some factors that are too often missing in schools as they are conducted today.

In such a building climate, student learning will be characterized by mastery of what is taught—demonstrated grasp of the fundamentals, competent use of skills, command over a subject—and not by mere passing grades. Mastery will be the standard of excellence, and schools will organize time and provide resources for this purpose. Here, also, the student will be seen as an active participant in learning. There will be high expectations for student performance; learning activities will be designed to improve student initiative, questioning, and exploration—not just the possible recovery and giving back of information; and a learning environment will emerge that is free of disruptive behavior.

Parents play a large role in what students bring to school; they make significant contributions to the social and learning climate of their classrooms. Recent survey data indicate that teachers consider the most crucial problem facing the public schools to be *lack of parental support*, not lack of discipline. A recent Gallup Poll (*Phi Delta Kappan*, October, 1984) indicates that American teachers do not think that today's parents of schoolchildren are doing a good job. Only one teacher in five (21 percent) gave parents an A or a B for their efforts. A larger percentage of teachers (31 percent) gave parents a D or an F for the job they are doing.

Finally, and in many ways most important of all, is the matter of equity. Equity will be served well in this kind of a climate. What does the NEA mean by equity? Simply, the NEA defines it as:

> *Full learning opportunity for all students*—varied and appropriate learning opportunities available for all individuals to realize their potential, irrespective of economic, social, physical, or psychological condition.(Futrell, 1984, p. 16)

Teachers and other FEA members developed this description of schools and the conditions that support professional practice. These conditions of work would make the profession more desirable to us all.

Evaluation of Teacher Performance

A third work condition that requires immediate consideration has to do with the evaluation of teacher performance. The NEA's report on Excellence In Our Schools adopted in 1984 addresses the issue of evaluating professional performance:

> We insist that there be a competent teacher in every classroom and a competent administrator in every school. There is only one way to achieve this goal: Every school district must establish a comprehensive system of personnel evaluation.

> We are tired of excuses from school officials (said the teachers who wrote this report). They must start implementing meaningful evaluation programs. No tenure law prevents a school district from evaluating teachers and administrators. No education association can force—or wants to force—a school district to retain an incompetent educator. What teachers want is fair, competent, and regular evaluation of the jobs they do. For such an evaluation system to be effective, teachers also want procedural guarantees and due process. *But no evaluation system can succeed without trained evaluators.* School districts must carefully train all administrators in the evaluation system that has been designed for their school staff. (p. 24)

Our commitment to that recommendation is supported by a substantial NEA investment in a comprehensive study of evaluation systems. This will be of interest to policymakers and the profession in their search for acceptable systems.

The NEA is interested in such questions as peer review, administrators' in-class observation, simulation, and so on. Suggestions from teachers and administrators are most welcome. At the same time, we are interested in looking at established and functioning standards for successful personnel evaluation programs.

In a recent—and unreleased—NEA teacher opinion survey, 92 percent of the respondents reported that the design of a teacher evaluation system should be a joint effort with teachers and administrators working together.

Eighty-two percent of the NEA members report that they are evaluated annually. That is the good news. The bad news is that more than 50 percent suggest that the evaluation process and outcome have nothing to do with their teaching. The administrator comes in and completes a checklist, but there is no relationship between what is on that checklist and what that administrator says either then or at the follow-up conference about what is to be done. Too often evaluation is simply a threatening administrative requirement. If we wish to make the profession more desirable, evaluation must be a part of an ongoing responsibility and commitment to professional growth.

Instructional Leadership

A fourth work condition can best be described as the role of the principal as a leader, one who sets the pedagogical climate control for the school. Clearly, this condition will make a more desirable profession.

In this area everything is not as it could be. In the NEA's recent survey, 34 percent of the teachers indicated that their principal "does not exert strong *administrative* leadership" (Unpublished). In the July, 1984 Gallup Poll of teachers, 54 percent of teachers grade administrators as a C, D, or F—10 percent give them an A.

In this same NEA survey, 29 percent of the teachers polled were dissatisfied with the support they received from their principal, and 34 percent indicated that, in their school, "professional relationships between teachers and administrators *did not* indicate mutual respect" (Unpublished).

Another unreleased study, and in my view an important one, indicates that teachers in Los angeles have one thing in their minds when they are told or asked to transfer to another school: the safety of the new environment. They also are concerned about the children who are there and the kind of satisfaction that one gets from the relationships with youngsters who like to go to school. A deciding factor in light of these concerns is the quality of the principalship; they will follow a good principal anywhere.

But only 25 percent of the principals in Los Angeles were followed. According to the teachers, 75 percent of the principals in Los Angeles are incompetent. Commissioned by the United Teachers of Los Angeles, the study grew from a desire on the part of the union (UTLA) to document the conditions of schools in which their members teach, to survey teacher perceptions with regard to reassignment to another school, and to assess the range of acceptable conditions for transferring to another school. All of us must look for ways in which we can work together for stronger leadership and management at the building level.

Salary Benefits

Finally, my fifth work condition has to do with salary, the fiscal environment in which teachers must work.

Without getting into a statistical thicket, some numbers will illustrate the dimensions of this "condition." In 1984, the average beginning salary for teachers was $14,500. For comparison, construction workers begin at $23,126; librarians at $19,344; laboratory technicians at $17,761; accountants at $20,484; bus drivers (in Washington, DC) at $22,906.

The figure for the beginning salary for teachers—let me say it one more time—was $14,500.

For teachers with experience this figure does go up. In fact, the average classroom teacher salary for 1983–84 was $22,019. But that figure is still lower than beginning salaries for bus drivers and construction workers.

In order to attract and retain the best teachers, salaries for teachers must be commensurate with those of comparable professions—NEA policy calls for a starting salary for teachers of no less than $24,000 with raises equivalent to those in comparable professions. If we want fundamental reform in the schools, we must begin by raising teacher salaries across the board.

THE RHETORIC OF REFORM

In 1983 the condition of education was couched in an aquatic metaphor: It was described as a rising tide of mediocrity that threatens our very future as a nation and a people.

Over the past year this bit of well-worn oceanic hyperbole has become symbolic of an unprecedented interest in the improvement of American education. What began as a rather fluid federal report has now trickled down to where it can be felt, if not always absorbed, by every school board member in the land.

Today we are embarked on what might be called a *second wave* of reports and recommendations to improve schools. We now have reports on the reports and reports on what to do about the reports. Nearly 300 second-generation reports have been developed at the state level.

Information about educational reform has become a growing industry both inside and outside the education community. Much of this information, especially the second-generation reports, is redundant, misleading, and even wrong. But, by and large, it does serve to increase public awareness and news media exposure of a number of very serious and interrelated problems now facing the nation. Public awareness and news media exposure, of course, are the stuff from which images are made, and it seems to me that with all of this attention to education, there is a great opportunity for all of us to improve the public image of the teacher.

Such a high degree of popular interest, of course, can be a healthy sign. But public interest can also be a popularity contest. Like Nielsen ratings, pop songs, best-selling books, and Michael Jackson gloves, such measurements often reflect little more than effective media manipulation. Certainly, this kind of data is seldom the stuff on which policy decisions can be based—decisions, for example, concerning directions for scientific research, foreign policy development, or clear goals of education.

We may already have reached a point where our educational policy is being set by commercial television networks. Recently, for example, ABC News gave us a three-hour report on education. During this Tuesday evening prime-time program, we were told that "public schools must solve the latchkey problem."

I hesitate to belabor this example, but I would like to call attention to (and paraphrase) something Bob Cole (editor of Kappan) said recently: Most institutions can't replace the functions of families. Teaching the basics is one thing; bringing up a child is entirely different. We have every right to demand that schools teach—and teach very well indeed. For the rest, we must look to ourselves.

To what degree are the news media directly influencing the development of educational policy today? At a time when all of us are awash in a sea of electronic images; at a time when our elections are won or lost on the candidate's ability as a television performer, it may be that we would do well to give more attention to some of the emerging relationships between television and education. It is possible to be a television literate? For that matter, is it possible to be a television illiterate?

The relationship between teaching conditions and the mass media of electronic communications strikes me as a rich area for image building and for research on image building. Clearly, the conditions under which classroom teachers must work are, to an important degree, related to, and influenced by, the image of teachers and teaching that is to be found in the mind's eye of the public. Further, it seems obvious that any increase in public respect for teachers and the teaching profession will depend on the public view, and an understanding of what teachers do. After all, *respect* is the most important psychic reward for teachers. And today, in our land, respect is shaped by the media of communication.

How accurately do these media report on the development of national policy? Or, for that matter, how difficult is it for the public to get accurate and balanced reports on education in a particular community? What are the effects of covering school board meetings on radio, television, or cable?

When teachers are pictured on TV (either as dramatic or as documentary characters), what community values are attached to these images? There has, of course, been important work done on some of these questions, but much of this type of research is not very popular just now, particularly in the realm of educational research. To the degree that schools of education can influence or control the directions taken by education research, more emphasis on some of these "image-media" problems may have a profound influence on making teaching a more desirable profession.

One difficulty with the public's image of schooling is the fact that most adults have spent many years in schools as students. As time goes by, these adult images become brittle and increasingly difficult to change. Meanwhile, in the real day-to-day world of schools and children, the rate of change accelerates—the kids are different; the teachers are different; everything is very different. But the public's image of the schools tends to be fixed on a time past.

RESEARCH

Perhaps the research that supports the practice of a profession can be viewed as a kind of measure of the intellectual health of that profession. One might even say that its research is the mirror of a profession. With this in mind, let me say how pleased I am to see such books as Sara Lawrence Lightfoot's *The Good High School: Practice of Character* *and Culture* (1983) and Ted Sizer's *Horace's Compromise* (1984). Both books report a kind of research that is unusual in the annuals of educational research, representing as they do a kind of ethnographic, humanistic view of the teaching process. There are some rare early examples of this. Phil Jackson's book *Life in Classrooms* comes to mind.

Such research reports as these are elegant indications that research on the process of education may at long last be divorcing itself from *the sterile scientism of psychometrics.* The "new" research such as that conducted by Lightfoot and Sizer will make all of us in the profession stand a little taller.

Another research area we seem to neglect at our own peril is comparative education. Here we are, living in a global village with more than 20 other high technology societies—each of them with comparable systems of free public schools; each of them with organized teaching professions; each of them with comparable cultural problems. It seems that when we ignore comparative education, we condemn ourselves to reinventing the wheel. And in the process, we do not make teaching as desirable a profession as it might otherwise be.

Finally, I would suggest that we watch our language. Of course, a specialized vocabulary is one characteristic of a profession. Jargon is something else. Many teachers I know would find this a more desirable profession if they were not subjected to the less-than-good English usage that characterizes an embarrassing amount of the education literature.

One is reminded of the comically fallacious syllogism that runs something like this: *Profound reasoning is difficult to understand; this work is difficult to understand: therefore, this work is profound.*

As a profession, we should clean up our language. If we are more easily understood, we will enhance our image and public confidence in the enterprise of education.

We, as educators, have a big job ahead of us. A rational base is not enough. In fact, it is only a beginning. Education has become political, more so than ever before. At the same time, education has never before been as necessary for a successful adult life. These facts account for the number of educational reform proposals and for the high public interest in education today.

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IX

Testing Teachers for Certification and Recertification

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The spate of activity on certification and recertification testing of teachers has occurred primarily in the South. In 1981, when Dean Sandefur conducted his first survey of teacher competency testing, he found that 16 states used or planned to use tests as part of their certification process, and of these, 11 were in the region encompassed by the Southern Regional Education Board (Sandefur, 1981).

Several reasons may account for the emphasis on teacher testing in the South. First, perhaps the need to safeguard against teachers who lack the most basic of the academic skills was greater in the South than in the rest of the nation. Although the Southern states are making headway in closing the gap on academic achievement measures, such as SAT scores, the gap still exists as a result of previous short-comings in the educational system and income differentials. Second, the movement to test for high school graduation began in the South and set the stage for testing teachers. Third, there is a history of regional cooperation in the South, spurred by the Southern Regional Education Board (SREB). Therefore, when in 1981 the SREB Task Force for Higher Education and the Schools recommended in *The Need for Quality* (see SREB, 1981) that teacher applicants be tested for minimum academic achievement levels before certification, the Southern states moved almost in unison to enact statewide mandates toward this objective. The two states that have enacted legislation requiring tests for recertification purposes are also in the Southern Region: Arkansas and Texas. SREB has had no policy on testing for recertification.

Since 1981, teacher testing has spread rapidly among the other regions of the United States, so that by latest count, well over half of the states are now committed to using tests for teacher certification. An additional 13 states are considering such action. When you analyze the geographic distribution of "testing" states, each region in the country is represented, although New England and Upper Plains have shown the least movement in this direction.

ISSUES IN TEACHER CERTIFICATION TESTS

Do Certification Tests Affect the Quality of Hired Teachers?

The rationale for testing prospective teachers is based on the assumption that one cannot teach what one does not know. While knowing something does not guarantee an ability to transmit knowledge to students, it is a necessary, if not sufficient, qualification for teaching. This assumption has been accepted as self-evident by legislators, who, in many states, were the instigators of teacher testing. Several beliefs contributed to the emergence of the assertion that teachers ought to be tested for academic knowledge, either in basic skills or in the subject areas to be taught. In particular, the popular press's publicized samples of grossly misspelled teachers' notes, the declining SAT scores of prospective teachers, and the general disenchantment with the academic preparation of college graduates helped bring about the decision that some applicants had to be weeded out of the teacher corps.

While legislators, as interpreters of public perceptions, do not necessarily employ research data to draw up legislation, one notable research study does lend credence to the notion that what a teacher knows has an influence on student learning gains. Coleman, in his monumental report of 1966, *Equality of Educational Opportunity* (Coleman, 1966, p. 26), found that most of the differences in student achievement outcomes are accounted for by socio-economic differences among children. But the verbal ability of teachers, as measured by vocabulary testing, was an important variable in explaining differential learning outcomes, once socio-economic variables were standardized. Indeed, the teachers' verbal ability, as measured by tests, was the single most important characteristic of teachers in explaining student outcomes variation. At the least, this suggests that testing prospective teachers on their knowledge and use of English is likely to contribute to the improvement of student learning.

Research studies seeking a link between NTE scores and teacher performance in the classroom have generally resulted in low correlations, both negative and positive (Cornett, 1982). One factor that has not received a great deal of attention is how teachers feel about competency tests for certification purposes. The teacher organizations vary in their postures on the subject. AFT has not objected to the tests, while the NEA has come around reluctantly to condoning them. What is more important, perhaps, is how individual teachers feel about competency tests. The Metropolitan Life Insurance Survey, *The American Teacher*, conducted in 1984 by Louis Harris polling associates, found that 82 percent of the teachers felt strongly positive or somewhat positive about requiring teachers to take competency tests before certification (American Teacher, 1984).

What Cut-Off Scores Should Be Established?

The cut-off scores for passage of a teacher certification test, whether on a test developed for one state, or on a nationally-normed test, are set by the individual states. The level at which cut-off scores are set usually depends on several factors: the minimum level of knowledge considered necessary by the panel of individuals chosen to recommend cut-off scores, the number of individuals who pass tests in pilot attempts, and the teacher supply and demand factors in a state. Thus, cut-off scores for a teaching field in which there is a scarcity of applicants are sometimes set at a lower level.

The minimal level at which cut-off scores are set is illustrated in two Southern states. For elementary education, the Louisiana and Mississippi subject area cut-offs fall at the 27th and 13th percentiles respectively on the 1983 NTE national norms. On the Communication Skills test of the Core Battery, cut-off scores fall at the 15th and 10th percentiles for Louisiana and Mississippi respectively. These cut-off scores are no guarantee of "quality," but rather they suggest a minimal performance level.

On state-developed tests, the cut-off score is sometimes also low. In Florida, the cut-off scores on the state-developed basic skills tests are set at 70% correct answers for mathematics, 86% for reading, and 57% for classroom management portions rspectively. These cut-offs represent raised levels established in 1983 following a good deal of newspaper publicity indicating that the test was too easy. Indeed, one private school had administered the test to 6th graders, and the students scored 70 to 100 percent correct on sample questions.

Testing at Certification—Too Late?

The SREB Task Force for Higher Education and the Schools (see SREB, 1981) recognized that "it is more fair to aspiring teachers to discover early in their training whether they need remedial work or if they are not suited to the profession than it is to eliminate them after an investment of four years" (p. 5). Thus, the Task Force recommended testing for admission into teacher education programs.

At present, at least 20 states mandate minimum scores on an objective test for admission into teacher education programs. Some states use SAT or ACT scores, while others have adopted the pre-professional skills test developed by the Educational Testing Service.

Correlations between the scores on the admissions tests and the subsequent teacher certification tests are quite high. For example, a study in North Carolina for SAT and NTE performance for 3,344 graduates of the University of North Carolina shows a very high relationship between SAT scores and the percentage of students passing the NTE Commons. With performance at or above a 900 combined SAT score, the passage rate on the Commons (then set at 529) ran from 94 percent to 100 percent. It dropped to 75 percent for SAT's in the 800's, and to 35 percent for SAT's in the 700's (Liaison Committee, 1981).

In Florida, where the College Level Academic Skills Test (CLAST) is now required for completion of an associate level degree or for admission to upper division status in a state university, the idea has been raised that the state's teacher certification test may become redundant. Students who have passed the CLAST will know more than is required for the minimum score on the Florida Teachers Certification test.

The current minimum SAT score required in some states for admission into teacher education colleges (often set around the 835 level) may indicate that the minimum teacher certification test scores will need to be raised, or the latter will be redundant in terms of performance demonstrated on admission test scores. Indeed, failures on teacher certification tests may be a function of low admission standards into teacher education programs, which in many cases are being corrected because of state mandated changes. This would indicate that teacher certification tests may become less important in the future as higher admission standards take hold and produce a higher caliber of teacher applicants.

There has been a great deal of emphasis on tightening the curriculum in the high schools, which, one would hope, will eventually improve the caliber of students entering teacher education programs. There is an equal need to focus on the college curriculum, which has become diluted. SREB has examined the transcripts of 6,500 college graduates of major universities in the region. Half of these graduates are education majors and the other half are arts and science graduates. Each of the courses on the transcript is being coded to produce profiles of the kinds of general education, subject area, and pedagogy courses taken by college graduates. The investigation demonstrates the need to tighten the core curriculum for college students, including, of course, education majors (See Galambos, 1985).

State-Developed Tests or Nationally-Normed Tests: Which is Preferable?

Of the states now using or planning to use teacher certification tests, most use a nationally-normed test and less than a dozen use a test developed specifically for that state.

The use of nationally-normed tests enables states to evaluate the performance of teacher applicants against national standards. In the current educational reform climate, with the attention that is focused on comparing student achievement scores between states, there is a similar emphasis on using a national standard against which state performance on teacher tests can be assessed.

The development of customized state tests usually results from the desire to make the tests as acceptable as possible to teachers within a state. Designing test items against objectives that are developed by teachers within a state is a means of "selling" the test on the basis that it represents the curriculum established for that state. Yet, there are some misconceptions associated with this philosophy. First, it is questionable whether the curriculum in certain basic subjects such as English and mathematics is really different from state to state. Because more and more students are to be tested on nationally-normed tests, as governors and other public officials seek comparisons on how state educational reforms are taking hold, there is less reason to believe that the curriculum will vary from state to state. Second, even where a state contracts with a test development firm for a customized test, that firm usually has a bank of test items that it uses for all its clients; hence, even a customized test represents a melange of nationally used items.

From the perspective of applicants for teaching positions in states other than the one in which they were certified, the use of nationally-normed tests presents decided advantages. A teacher who has an acceptable NTE score in one state can use that score when moving to a different state that also uses the NTE. But if that teacher moves to a state that uses a customized test, another examination must be taken. This is expensive to teachers, who usually must pay for the test administration. A case in point is Florida, which uses its own test of basic skills and professional education. Although the state imports more than half of its teachers, it has not developed a crosswalk between results on its own test and NTE scores. Neither does it recognize a given NTE score in lieu of its own test score.

The Southern Governors' Association in 1983 passed a resolution urging states to develop reciprocity agreements that would enable teachers who have taken a test in one state to use the score on that test instead of being required to take another test. However, states have not moved to implement this recommendation. The Southern Regional Education Board and the Southeastern Educational Improvement Council have both worked with state certification officials to obtain such action. But states have not moved on this recommendation.

For some subject areas where few teachers are tested, there are no NTE tests. For example, there is no test for teachers of the German language. This caused South Carolina, which uses the NTE, to develop additional tests at considerable expense for the areas in which there are no tests. Such efforts are not productive if a cut-off score is to be based on the curve of teachers' performance, because too few individuals are taking the test to produce a curve.

States that have developed their own tests are faced with the expense of developing new versions of the tests as the years go by. This has led to some interest on the part of certification and testing officials to develop a bank of test items for various subject areas, or at least for those subjects that have few test applicants. Then, states could dip into the test bank, as well as drawing upon the objectives represented by the test items, in order to create new versions of the test at lower expense.

How Does Testing Affect Minorities?

The single most important issue regarding teacher certification tests involves the high failure rates among minority candidates. Statistics on these results have been published throughout the country. In state after state, the results show failure rates among black candidates as high as two-thirds, while white applicants fail at a much lower rate. Minority failure rates are no lower in states that have designed their own tests (Arizona and Georgia are examples) than in states that use the NTE or another nationally-normed test. Failure rates for Hispanics are also higher than for white applicants. However, in Florida at the latest administration of the state-developed test, the failure rate for almost half of the Hispanic candidates was lower than for Blacks. In Arizona, on the other hand, the failure rate for Hispanics exceeded the rate for Blacks.

There is no doubt that if such failure rates continue, minority representation in the teaching force will decline. In 1980, 12.5 percent of the teaching force was minority (8.6 percent black), whereas 26.7 percent of student enrollments were minority. The percentage of minority teachers remained steady from the early 1970s through 1980.

The percentage of minority children in the nation's schools is rising, at the same time that minority representation among teachers is threatened. The decline in enrollment for teacher education in recent years among the predominantly Black colleges of education is double that of other member institutions in the American Association of Colleges for Teacher Education (AACTE, 1983). While the fear of failing tests may account for some of the Black decline, a more potent factor is probably the growth of employment opportunities for Blacks. The impact of affirmative action programs in recent years may have had a greater impact on luring prospective teacher education majors into other more lucrative fields.

What will have the greater negative impact on children in the schools—the lack of role models on minority children if Black representation among teachers declines, or the possibility that teachers with less than the minimum qualifications will teach in the nation's schools? William Raspberry, a Black education writer for the *Washington Post*, comments on this dilemma:

> I assume the tests are culturally biased. But if they are biased in favor of the culture in which our children will have to operate, is that unreasonable? I assume that one of the reasons minority applicants fare worse on the tests than whites is that they themselves are the victims of inferior schooling. But is that any reason to perpetuate the disadvantage by putting victims in charge of the classrooms? . . . We can have well-educated children or ignorant teachers. We cannot have both. (Raspberry, 1983, p. 20)

Perhaps there are some glimmers of hope that would indicate emerging solutions to the dilemma. Current passage rates on teacher certification tests do not yet reflect the tightened academic standards in the nation's public schools. As these take hold, there is the hope that basic skills, which fundamentally account for the failure rates on teacher certification tests, will improve. Indeed, the trend on SAT score differentials between Blacks and whites from 1976 through 1983 shows a narrowing of the gap. Predominantly Black institutions whose graduates have had high failure rates on teacher certification tests are moving to improve their academic programs, to expose students to test-taking, and to sharpen the students' abilities to use reasoning skills. Indeed, the Southern Regional Education Board and the Educational Testing Service cooperated during 1983 in an effort toward these objectives with a number of predominantly Black colleges. It is too early to know whether these efforts will have major benefits.

There is one piece of evidence about minority performance on teacher certification tests that has not received much attention. Ayres (1982) analyzed the performance on the NTE Commons section of 3,334 students by race, and by SAT scores. The students were graduates of 15 senior public colleges and universities in North Carolina, of which ten are predominantly white and five are predominantly Black. He found that once SAT scores were controlled, Blacks attending predominantly white institutions scored an average of 25 points higher on the NTE Commons than Blacks in predominantly Black institutions. Although only 19 whites attended the predominantly Black colleges, once their SAT's were controlled, they scored 37 points lower on the NTE Commons than whites in predominantly white institutions.

These results indicate that efforts to tighten the academic program in the predominantly Black colleges do have the potential of raising scores on the NTE. Obviously, there is an urgent need to pursue such a policy.

Testing for Recertification: Is It Appropriate?

Three states have passed legislation requiring certified teachers and administrators to take tests in order to remain certified: Arkansas, Georgia and, Texas. In Arkansas, the test is to be administered for the first time in the spring of 1985, and will be a basic skills test. A testing firm has been employed to construct the test, after the Education Testing Service declined the use of the NTE for recertification purposes. Arkansas-certified personnel will be required to pass the test on functional academic skills (including, but not limited to, reading, writing, and mathematics) within two years, and they also must take a nationally recognized test in the subject area in which they teach, the latter being replaceable by successful completion of six semester hours in content courses applicable to the teaching field. Successful passage of the NTE for initial certification satisfies the requirements of this law.

In Texas, legislation for the testing of certified personnel passed in the spring of 1984. The law specifies that for secondary teachers, the examinations to be chosen by the State Board of Education shall cover the subject area in which the teacher is certified. Teachers and administrators are to be involved in the development of the examinations, and the test is to be passed before June 30, 1986. A teacher may teach under an emergency certificate for only one school year if the test is not passed.

It is, of course, too early to determine the effects of these new laws. It may be assumed that these laws will be tested in the courts, just as the initial teacher certification test laws were challenged. The latter have survived challenges, but the legal precedent for testing for entrance into a profession, in view of the ubiquitous licensing laws, is probably stronger than is the precedent for testing once individuals have been employed. At that stage, the question of vested interests in one's job will be invoked against the public's right to safeguard standards in its schools.

There is one more juncture at which teachers may be tested in the future. In many of the proposals for master teacher plans, or for career ladders, the test has been suggested at some stage in the ladder. In Tennessee, for example, the entrance into the career ladder sequence commenced in the summer of 1984 with administration of a subject area test for all applicants.

In Florida, subject area tests are required as part of the career ladder system. The University of South Florida is to develop the required subject area tests. (The State Department of Education chose not to validate the National Teacher Examinations for most teaching fields.)

The concept of passing another test for a higher level of qualification in a profession does have precedent in other professions. The Certified Public Accountant's test and the specialty board tests in medical fields are examples. They constitute more advanced levels of achievement than are required for initial entrance into a profession.

CONCLUSION

In evaluating the whole movement of testing teachers, it is important to remember that we are in the midst of a tremendous wave of demand for accountability. This has developed because of the general public disenchantment with the effectiveness of both public and higher education. When the day comes that high school graduates have mastered basic skills (and a modicum of other core subjects) and when college graduates demonstrate the ability to think critically and write cogently then the public demand for tests and accountability will diminish. Until then, testing at all levels will be considered necessary.

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X

Performance-based Certification in Georgia: Present and Future

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The concern for quality public education has been an on-going topic for the news media. During the last year, several national reports on public education challenged the quality of educational opportunities being provided children. *A Nation At Risk*, prepared for the U.S. Department of Education, The Education Commission of the States' report, *Action for Excellence*, as well as *Making the Grade*, a report from the Twentieth Century Fund's Task Force on Elementary and Secondary Education Policy, all have expressed concern for the quality of public education. Falling SAT scores and other measures of student achievement have added to the increasing concern of parents, businesspersons, legislators, and educators. With the media's negative focus on public education and the public's increasing concern for quality, it is important that clear indications of progress, commitment, and success be made by those involved in public education.

Clearly, formal training alone does not produce a competent, capable worker. To promise quality and ensure at least minimum competence, most trades and professions require some form of licensure based on a test of competence. This is true of physicians, lawyers, plumbers, cosmetologists, and many other trades or professions. However, this has not been true for teachers. The responsibility for determining the competence of teachers has been one that education associations and agencies have been reluctant to assume. The responsibility to ensure minimal competence ultimately falls to the licensing agency. As in most other states, the licensing agency in Georgia is the State Board of Education.

DEVELOPMENTAL EFFORTS

Recognizing the need to provide assurance of minimal competency for licensure, the Georgia Board of Education (through the Georgia Department of Education) in the late sixties began developmental efforts in competency-based teacher education and performance-based teacher certification. This direction for the department first emerged in the needs assessments conducted in Georgia beginning in 1968. In 1972, the state superintendent of schools announced that one of the 23 missions for the department of education was to certify personnel on the basis of demonstrated competency.

In 1975, an advisory group to the state board, the Teacher Education Council, recommended that the State Board of Education adopt policies providing that issuance of the initial teaching certificate be based on two criteria: a satisfactory score on a knowledge test external to the preparation process and completion of an approved teacher education program. The council further recommended that the renewable certificate be based on demonstrated performance and not merely on experience and/or a master's degree. The council proposed that these policies become effective on September 1, 1978. The State Board of Education accepted the recommendations and adopted the appropriate policies.

The Georgia Teacher Certification Tests were developed and validated to be job-related and to reflect the minimum content knowledge that is necessary to teach in each certification area in Georgia classrooms. The objectives and content of the examinations, as well as the minimum cut-off scores, were determined by committees of outstanding Georgia educators in the respective certification fields. The items that measure the objectives were reviewed by the committees for item/objective content match, content accuracy, lack of bias, and minimal competency. A job analysis was conducted throughout the state to determine the relative importance of each objective and the amount of time spent in teaching it to prospective teachers.

The certification examinations are job-related to the public schools of Georgia. They are designed not as a summative evaluation of an applicant's college preparation, but rather they are a test of grade-level subject matter that a teacher would be expected to know in order to be minimally competent to teach. The items on the examination are relevant to the subject matter that is to be taught. Through a request for proposal (RFP), National Evaluation Systems, Inc., was selected to receive a state-funded contract in 1975 to develop the tests. They were asked to work with a Georgia ad hoc committee of public school and college teachers in each of the teaching field areas.

Through another RFP, the University of Georgia began a state funded contract in 1976 to develop the components for the state-designed system of assessing teaching competency on the job. More than 4,000 teachers, administrators, and college professors were involved in identifying an initial set of 20 competencies as generic and essential for all subgroups (i.e., across grade levels, teaching fields, and job settings). This set of 20 competencies was the basis for the development of instruments to guide the assessment of teaching behaviors.

THE ASSESSMENT INSTRUMENTS

The *Teacher Performance Assessment Instruments (TPAI)*, composed of the Teaching Plans and Materials Instrument, the Classroom Procedures Instrument, the Interpersonal Skills Instrument, the Professional Standards Instrument, and the Student Perceptions instrument, were field tested across the state from the fall of 1977 through the spring of 1980. These field-test efforts involved training teachers and administrators to use the instruments in their assessment of student and beginning teachers. The results of these field tests, plus feedback from teachers who were assessed, from teachers and administrators using the instruments, and from various reliability and validity studies, reduced the number of competencies addressed by the *TPAI* to 16, with 14 identified to be required for certification.

Selected competencies currently assessed are that the teacher:

I. Plans instruction to achieve selected objectives.
II. Organizes instruction to take into account individual differences among learners.
III. Obtains and uses information about the needs and progress of individual learners.
IV. Obtains and uses information about the effectiveness of instruction to revise it when necessary.
V. Communicates with learners.
VI. Demonstrates a repertoire of teaching methods.
VII. Reinforces and encourages learner involvement in instruction.
VIII. Demonstrates an understanding of the school subject being taught.
IX. Organizes time, space, materials, and equipment for instruction.
X. Demonstrates enthusiasm for teaching and learning and the subject being taught.
XI. Helps learners develop positive self-concepts.

XII. Manages classroom interactions.

Each competency is defined by two to five performance indicators. For example, for Competency VII, "Communicates with learners," the indicators are that the teacher:

- Gives directions and explanations related to lesson content.
- Clarifies directions and explanations when learners misunderstand lesson content.
- Uses responses and questions from learners in teaching.
- Provides feedback to learners throughout the lesson.

Each indicator is scored on a five-point scale, with descriptions for all scale values. For example, for Indicator 7, "Provides feedback to learners throughout the lesson," the scale of descriptors is as follows.

1. Accepts learners' comments or performance without feedback about their adequacy.
2. Responds to negative aspects of student work, but few comments are made about positive aspects.
3. Informs students of the adequacy of their performance. Few errors pass by without being addressed.
4. Helps learners evaluate the adequacy of their performance.
5. In addition to 4, teacher probes for the source of misunderstandings that arise.

THE CERTIFICATION TESTS

The Georgia Teachers Certification Tests (TCT), implemented in 1978, are used to determine whether prospective teachers possess essential knowledge in their respective teaching fields. Twenty-eight tests covering 48 certification fields have been developed. They are administered three times each year at five sites over the state. A registration fee of $35, which accompanies the registration form, is sent directly to the testing contractor. Registration bulletins, copies of test objectives, and study guides for the various tests are widely available.

Prospective teachers are encouraged to take the TCT during the senior year of their college or university teacher education program. At the request of an employing superintendent, an initial one-year certificate can be issued even though an applicant has not posted a passing score on the appropriate TCT. This is primarily an escape valve for teachers coming into Georgia at the last minute and who have not had an opportunity to take the TCT. Those who have not passed the test within the one-year validity period are not issued another certificate.

With the development of the Teacher Certification Tests and the on-the-job assessment employing the Teacher Performance Assessment

Instruments, the state was set to implement Performance-Based Certification. Test and assessment requirements applied to teachers completing preparation after May 1, 1980. The performance-based components addressed two primary objectives.

1. To ensure that teachers can demonstrate minimum competency relative to subject knowledge and minimum performance in an on-the-job setting.
2. To extend preparation into the initial years of employment.

The Georgia University System Board of Regents in 1983 strengthened the preservice phase of the state's teacher education program by adopting a policy of placing on probation those public college teacher preparation programs whose students fall below a 70 passing rate on the TCT. Response from the colleges has been positive; many have restructured their curricula and are paying more attention to student results. The probationary institutions are required to submit a remediation plan.

ON-THE-JOB ASSESSMENT

The on-the-job assessment focuses on the teacher's capabilities to organize, plan, and implement instruction and to manage the classroom and establish positive interpersonal relationships with students. The assessment is coordinated by a fully state-funded, statewide network of 17 regional assessment centers. The centers are staffed with professional educators, most of whom have come directly from classroom teaching. Their responsibilities include the following.

1. To provide teachers with an orientation to the assessment process prior to the actual assessment.
2. To coordinate the actual assessment process by scheduling, selecting team members, assessing teachers, and compiling and processing assessment data.
3. To provide feedback to teachers through an interpretation of assessment results and delivery of a performance profile.

On-the-job assessment is a requirement for all teachers who enter the profession. The teacher is provided three years or six assessment opportunities to demonstrate proficiency on all 14 competencies necessary to convert to the renewable Performance-based Teaching (PBT) certificate. Individuals who receive the PBT within the first two years receive extra step(s) on the state salary schedule. *This advancement policy makes Georgia the first state in the U.S. to award performance-based compensation.*

The state has a provision that will allow a teacher to waive an assessment opportunity. If for a specific reason a teacher wishes to forgo an assessment opportunity, the teacher contacts the area Regional Assessment Center and files a request. While there are six opportunties offered to each teacher, the waiver of an assessment opportunity will result in the permanent loss of that scheduled assessment opportunity as well as loss of the privilege to combine results of any assessment conducted prior to the signing of the waiver. The department does not advise waiving an opportunity for an assessment, but it is permitted and a wise choice under some circumstances. A few teachers who are sure that they will be leaving the state or the profession elect to forgo the assessment, and they have that right.

Each of the assessment instruments is scored independently by a three-member team selected by the regional assessment center and composed of an administrator and a peer, both from the local school system, and an external data collector from the regional assessment center. At least one member of this team must hold a current, valid certificate in the same field as the teacher being assessed. Each person on the assessment team carries out the following responsibilities.

1. Individually reviews and studies the portfolio of the teacher being assessed and prepares for interviewing the teacher.
2. Participates in an interview of the teacher being assessed.
3. Individually observes, at a predetermined and agreed upon date and time, the teacher as he/she teaches from the portfolio submitted.
4. Submits assessment data to the Regional Assessment Center for processing.
5. Maintains the confidentiality of the assessment data.

To participate as a member of an assessment team, each administrator, peer, or external data collector must be trained to use the instruments and must meet proficiency requirements in use of the instruments. These training requirements include 50 hours of instruction and practice with the instruments in the field. In addition, the trainee may be required to prepare a portfolio and be assessed. No one serves on an assessment team for certification purposes without meeting current state training requirements In addition, annual update training is provided and inter-rater agreement checks are conducted to help maintain accuracy and skill in using the instruments.

The state assessment calendar is based on a school year of 190 contract days and 180 teaching days. Orientation to the assessment process normally is provided by the regional assessment center within the first 30 days of the contract period. For most teachers, this occurs during preplanning. The fall assessment period begins after the first 20 teaching days, although teachers having their first assessment begin it only after their first 30 teaching days. There must be a minimum of 50 teaching days between a fall and spring assessment. Spring assessments begin on the 110th teaching day. No assessments are scheduled during the last ten teaching days.

The assessment of an individual teacher is scheduled in advance with the teacher's participation in identifying the class and times for the assessment. The actual assessment period is based on the teacher's development of a seven- to 10-day set of lesson plans or portfolio. Because a due date for the portfolio is part of the scheduling process and is agreed upon in advance, and because the portfolio is a major component of the assessment requiring careful study by all team members, it is imperative that the complete portfolio be submitted by the due date. A team interview and three individual observations are scheduled to take place during the first five days of the portfolio period. The one-hour interview occurs first, with the three assessment team members questioning the teacher about teaching plans and materials. Subsequently, each member of the assessment team, separately and on different days, observes the teacher for a full class period during the portfolio period. Teachers in elementary grades are encouraged to plan for and schedule periods longers than the 30-minute minimum as it is often difficult to demonstrate within this limited time period all of the teaching behaviors addressed in the two observation instruments. All assessment activities must be conducted with the teacher teaching in a field in which he/she is certified.

Although the regional assessment center is responsible for scheduling all assessment-related activities, the teacher may choose the time of day for classroom observations. In addition, the teacher also chooses the class for which the portfolio will be prepared and during which the observations will occur. The class chosen must be in a subject area within the teacher's field of certification. Allowing these elements of choice enables the teacher to develop a portfolio or plan a unit that is an integral part of his/her instructional program.

The regional assessment center processes all assessment data and develops a performance profile for the individual teacher. This profile and certification summary reflect a compilation of the data from all three members of the assessment team. Center personnel deliver and interpret the profile in a conference to help the assessed teacher understand the results and his/her status in relation to the performance requirement. The performance profile shows all ratings but presents them in a scrambled manner. The center maintains confidentiality of performance profiles and will not reveal individual ratings.

A copy of the performance profile will be released to the local school system or other agency designated to provide staff development opportunities for the teacher assessed. In addition, performance data will be released to the college or university attended by the assessed teacher to be used for program evaluation. If a teacher does not wish the data to be released to the local school system and/or college or university attended, written notification by the teacher must be provided to the assessment center.

At this point—the provision of staff development based on assessed needs—the Georgia colleges and universities become involved in the assessment process. During the development and implementation of the entire program, efforts were purposefully made to separate the preparation and assessment phases. The idea was to establish, through the TCT and the *TPAI*, an external check on the preparation program.

Colleges are encouraged, however, to become involved in staff development for assessed teachers. In many instances college people are working closely with local school districts and with Georgia's regional agencies (Cooperative Education Service Agencies) to provide staff development based on assessed needs. Ideally, master's degree programs also would be based on assessed needs.

If a teacher does not demonstrate mastery on all 14 competencies, then the next assessment scheduled will be a partial assessment addressing those competencies for which the teacher has not demonstrated mastery. The exact procedures to be followed and a definition of what is to be required of the teacher are determined by the nature of the competencies to be assessed. The regional assessment center will provide the teacher with individual orientation and establish clear directions for the partial assessment, which must be based on a new portfolio or a different instructional unit. Submission of a portfolio used in a previous assessment invalidates the partial assessment.

The majority of teachers require more than one assessment to meet certification requirements. For example, of all teachers assessed for the first time during the fall of 1982, 27 percent demonstrated mastery of all 14 competencies on their first assessment. Similarly, of all teachers assessed for the first time during the fall of 1983, 28 percent demonstrated mastery of all 14 competencies. Additional assessments were required for the remaining teachers to meet certification requirements. Although the majority of teachers assessed for the first time do not demonstrate mastery of all 14 competencies, they have not failed. Generally, by the end of the second assessment or the end of the initial teaching year, approximately 75 percent of the teachers successfully complete the assessment process. For those who have not, additional assessment opportunities and staff development are available.

STAFF DEVELOPMENT

The Georgia Department of Education provides funds to local school systems for teacher staff development based upon the needs of teachers identified through on-the-job assessment. The performance profile, which reflects all the data gathered in the assessment process, provides a clear delineation of areas of strength and areas in which a teacher may need some assistance to improve specific teaching skills and/or techniques. This needs assessment capability of the instrument makes assessment during the initial year of employment even more important. It allows a teacher to improve the teaching skill acquired in his/her preparation program, to develop new skills and techniques, and to improve his/her capabilities to provide effective instruction. The responsibility for providing teacher staff development rests with the local school system, not with the regional assessment center. The center can help teachers identify agencies in their areas that may provide assistance, but execution of a staff development program is the responsibility of the individual teacher and the local school system.

EVALUATION AND RESULTS

More than 6,000 Georgia educators have been involved in the assessment of the beginning teachers. The group has included beginning teachers, peer teachers and administrators on assessment teams, school system liaison personnel, and regional assessment center data collectors.

Beginning teachers considered the information provided at their orientation adequate, and they perceived the Regional Assessment Center personnel as prepared and knowledgeable. During their interview, they felt that there was an effort to put them at ease and to give them an opportunity to explain their teaching plans. After their assessment was completed and a profile of their performance was generated, the beginning teacher was provided an interpretation session. They indicated that it was clear and informative and that there was information on staff development resources.

Peer teachers and administrators said that their participation in the assessment process gave them a better awareness of the basic skills of teaching and that their school system used the results for teacher growth. This group indicated that the overall process was worthwhile. School system liaison personnel and the data collectors from the Regional Assessment Center evaluated the assessment process in very positive terms and describe it as a successful program.

The Georgia Teacher Certification Test and the on-the-job assessment program have been extremely beneficial to Georgia. This has been a pioneer effort with some problems but many successes. Many who were concerned about the program in the beginning are now among its strongest advocates. We believe that teachers in Georgia classrooms today are better prepared than ever before and that they are the key to the significantly improved student performance we have seen in recent years.

The Georgia plan may not be the answer for everyone; we designed it to meet the needs of our particular situation. We are constantly evaluating, revising, and improving the procedures, and this process will continue. After using the test for six years and the assessment for four years, we feel very comfortable with the combination. What we have learned will undoubtedly be helpful to us as we work in the next few years toward implementing the career ladder proposed recently by the Governors' Education Review Commission.

Georgia's performance-based certification process of assessment, feedback, supportive supervision, and staff development is a pioneer, creative, and comprehensive approach to the 'controversial nationwide problem of teacher competency evaluation. It has received extensive press coverage and national recognition. Education officials from many other states have shown interest in the program and several, including Mississippi, Alabama, Arizona, South Carolina, and Oklahoma, have adopted part of the state's testing and assessment procedures. Florida, Tennessee, Maryland, among others, are drawing from Georgia's pioneering efforts in developing their own teacher evaluation/certification programs.

The Georgia certification program has set, in many respects, a national standard for teacher competency measurement with its dual emphasis on knowledge and performance. And while the program is based on objective judgment, it also has a backbone of support for the teachers it serves. These elements, along with the program's careful and responsive development, have ensured the success of performance-based certification with government officials, the education community, the teachers who undergo the certification process, and, most important, the public.

THE FUTURE

Expand Performance-Based Certification

Initially the plan was to require performance-based certification of leadership and service as well as teaching personnel. Development in these areas has been curtailed because of budget reductions and a concern of the State School Superintendent and others that the role of school leadership was not well defined and perhaps there were few generic competencies that could be specified for this role.

School effectiveness research influenced the Governor's Education Review Commission in its 1984 report to recommend that the Georgia State Board of Education add an assessment requirement for certification in leadership and the service areas of media, counseling, and school psychology. Funds will be requested from the 1985 Georgia Legislature to develop performance assessment instruments in these four areas. Development, field testing, and the preparation of personnel in leadership areas, service areas, and regional assessment centers to apply the assessment instruments will take more than two years. Assessments should begin in the fall of 1987 and anyone completing initial preparation in leadership or service areas after September 1, 1987, will be required to pass a performance assessment in order to earn a renewable certificate. Certification tests in administration-supervision, media, counseling, and school psychology are now in effect. Assessment in these areas will complete performance-based certification in each of these fields. The Governor's Education Review Commission is recommending funds equal to ½ percent of total salaries be provided for staff development. If this proposal is funded, approximately $90.00 for each public school educator will be provided each year. During the first three years in a leadership or service role, these staff development funds should be used to address needs identified by the assessment. After renewal certification is earned, annual evaluations by the local system, as required by *Georgia School Standards*, should serve as the basis for staff development.

The entry level certificate for leadership and service is the master's degree. Baccalaureate preparation in a teaching field and three years of teaching experience are prerequisite to certification in these fields. A person must pass the certification test during the first year on the job and will have up to three years on a non-renewable leadership or service certificate to demonstrate acceptable performance. Those persons meeting the performance standard will be issued a renewable certificate.

Persons holding a master's degree in a teaching field have two options for meeting the college preparation requirements in school leadership. Completion of college courses to meet an evaluation from the certification office (against minimum certification standards) or completion of a college approved program can result in certification. There is more accountability in the approved program approach because screening for admission and completion of the program is required, whereas minimum certification requirements through an evaluation can be met through an accumulation of courses from several different institutions. The Governor's Education Review Commission is recommending that the State Board of Education adopt the approved program as the only way to certification in leadership because of its increased accountability. Many changes in *Criteria for Approved Programs in Georgia* are being recommended that will require more structure in the programs and assure more preparation as an instructional leader. An internship, which is now optional, will become a requirement.

Career Ladder

The Governor's Education Review Commission is recommending a career ladder for teachers that is competitive and market sensitive. A primary objective is to make teaching attractive, with the result that outstanding teachers can afford to remain in the classroom and bright young people can be recruited into the profession.

Criteria for moving up the ladder include: experience at each level; increased knowledge as measured by the Teacher Certification Tests; increased performance as measured by the TPAI; increased responsibility such as supervision of student and beginning teachers, curriculum development, and the provision of staff development for other teachers; and increased student learning above some type of standard. The last criterion is most controversial and could result in a dramatic expansion of student statewide testing and assessment. The consensus now appears to be that the career ladder will be implemented without student gain as a criterion.

The TCTs and TPAIs were developed to test and assess beginning teachers. They will have to be validated at higher levels for use with experienced teachers. Two of the TPAIs have never been used for certification purposes. *Student Perceptions* were not used because we were not willing to face the possibility of students having to appear as witnesses in Court if the State were to be sued. The *Student Perceptions Instrument* has been field tested extensively, however, and shows that students hold very similar perceptions to those of the professional data collectors who serve full time in the assessment role. Administrators and peer teachers are generally slightly less critical in their assessments of teachers being evaluated. The *Professional Standards Instrument* has not been used for certification purposes because it measures professional responsibilities and engagement in professional self-development more appropriately expected of an experienced teacher. It would be reasonable to apply these instruments for purposes of certification decision making at the higher performance levels expected of career teachers.

The observations of teacher performance for career ladder advancement likely will be random and unannounced. Teachers desiring to be assessed could submit each month a list of protected days when testing and other activities were going on, but they should expect assessment at any other time. Observations of beginning teachers are scheduled well in advance so that the beginning teacher has every opportunity to prepare and exhibit the best possible teaching practice. Performance-based certification is designed for the beginning teacher to demonstrate that he or she is capable of effective teaching practice. For career ladder purposes, an experienced teacher should be able to demonstrate that he or she *consistently* exhibits effective teaching practice as shown during random, unannounced observations.

We are confident that the identification of teacher needs through assessment of performance, the provision of staff development to specifically address these needs, the annual evaluation of the teacher in terms of teaching performance, and the extent to which local aims and objectives are met will result in student learning. When this procedure is broadened to include leadership and service personnel and when the recruitment and retention of outstanding teachers is improved through the application of a career ladder system, there should be even more observable improvement in public education in Georgia.

XI

Post Certification Development of Teachers and Administrators

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This paper will focus on the continuing development of teachers and administrators after they receive the baccalaureate degree. The development of the educational professional takes place in three types of institutions. Advanced degree programs offered in colleges and universities that lead to the master's and doctorate degree are the mainstay of continuing development. Second in importance are the staff development programs sponsored by local, regional, and state educational agencies. Professional organizations (e.g. Association for Supervision and Curriculum Development, American Association of School Administrators) also exert an important influence on the personal and professional development of teachers and administrators. The primary emphasis of this paper will be on the third collective institution that provides inservice education or staff development—the local education agency. The first part of the paper will deal with a brief and selective review of the research on inservice education of teachers and administrators. The second part will present the experience of the Pittsburgh, Pennsylvania, School District's research-based programs in staff development for teachers and administrators known as PRISM (Pittsburgh's Research-based Instructional Supervisory Model).

THE CURRENT STATUS OF INSERVICE EDUCATION

A variety of reports filed on American public education in 1983–1984 raised serious doubts about the quality of education in this country. *A Nation at Risk* (Gardner, 1983) led the way in calling for fundamental improvements in the performance of teachers and administrators in the nation's public schools. Many other national reports such as Boyer's (1983) *High School*, Goodlad's (1984) *A Place Called School*, Sizer's (1984) *Horace's Compromise*, to cite just a few, call for substantial reform at all levels of public schooling and in the preparation of teachers and administrators. Extensive staff development will be required if the nation is to meet the challenge for school improvement. Teachers and administrators must become more accountable and productive if quality is to be restored in American education.

In the long run, improvement in the performance of teachers and students in the public schools will require intensive analysis of the programs offered by teacher training institutions. Also, positive changes must be made in the recruitment and selection of teachers and administrators who enter the profession. In the meantime, however, attention must be focused on ways of improving the performance of professionals in the field.

Staff development for teachers and administrators takes an added importance for many school districts in the Northeast and Upper Midwest. In those areas, schools are being closed because fewer children are available to be educated. Declining birth rates have resulted in the closing of many schools. Young teachers in those areas of the nation are being furloughed and, as a result, little "new blood" is coming into districts. For example, of the 2,900 teachers in the Pittsburgh Public Schools, only eight are currently in their first three years of teaching. Thus, if schools are to improve their performance, emphasis must be placed on the continuing professional development of teachers and administrators.

Lanier (1984), in reviewing the research on the demographics of preservice and inservice teachers, notes that the group of inservice teachers is becoming much more stable than ever before. However, she points out that the most academically able teachers are leaving the profession, while the less academically able ones remain—making the job of staff development more difficult.

Inservice Teacher Education

The continuing professional development of educators, both teacher and administrators, is big business. Yarger (1982) estimates that for every ten teachers or administrators in the United States there is one person who is engaged in the continuing professional development of those educators.

These persons include college professors, local education agency trainers, and staff development personnel in state or regional education agencies and professional organizations.

While there is much rhetoric about the inservice teacher education programs offered at all levels of schooling, there is no substantial body of research with regard to its procedures or its outcomes, according to Yarger (1982). Further, Yarger points out that there is no reliable information on the content of inservice teacher education.

> The state of existing knowledge is less than one would desire, leaving little choice but to speculate and make inference judgments. Although inservice education does have content, it is delivered in some format and serves several purposes. The ability to learn about it and communicate about it succinctly and with certainty is difficult in the early 1980s. (p. 888)

This lack of precise language to describe or communicate about the inservice training of teachers is a serious problem, Yarger maintains. Further, he points out that there are virtually no generalizable or replicable studies of inservice training of teachers. The work of Joyce and Showers (1980, 1982) stands out as a serious attempt to inform and influence the design of inservice training of teachers based upon research studies.

However, it is unlikely that there will ever be enough research or even full scale evaluation of the typical inservice programs for teachers and administrators. According to Yarger (1982) this relates to the fact that there is no single institutional base for inservice training. Teachers and administrators may pursue courses at colleges and universities or attend workshops and seminars sponsored by local, regional, or state educational agencies. Professional organizations also sponsor continuing education workshops. Thus no single organization takes sole responsibility for inservice development of the educational professional.

Lanier (1984) also points out that staff development programs within most school districts are uncoordinated. She reports that professional development programs in schools and in higher education institutions tend to be programmatically isolated and politically weak. Further, she notes that within school districts many people are involved in staff development without knowing what others in the same district are doing. In essence, staff development in local school districts has grown in importance but not necessarily in quality, according to Lanier.

The Findings of Teacher Effectiveness Research

Data emerging from "teacher effectiveness research" have equal applicability to preservice and inservice according to Berliner (1984) and Lanier (1984). In a broad review of the research on teaching, Berliner (1984) reports the findings of studies related to pre-instruction, during-instruction, and post-instruction factors. One example of pre-instructional factors is the work of Cooley and Leinhardt (1980). They found that the opportunity to learn was the most important factor in accounting for student learning. Typical of the during-instruction factors is the work of Rossmiller (1982) who demonstrated that time on task is consistently and strongly related to student achievement in reading and mathematics. And, an example of post-instructional factors is the work of Gage and Berliner (1984). They revealed that substantial use of corrective feedback shows a positive relationship to student achievement and attitude.

The management of instructional time, the pacing of instruction, the formation of student groups, and the types of learning activities are significant factors within the control of teachers in the pre-instructional phase, according to Berliner. All of the preceding have an impact on student learning. Berliner urges teachers to be aware of the power of their decision making with respect to student achievement, attitudes, and classroom behavior.

The research based variables of engaged time, time management, success rate, academic learning time, monitoring, structuring, and questioning all have significant influence on student achievement. Berliner advocates that the power of any single variable is limited; however, when used in combination, they are more likely to produce a positive impact on student learning.

According to Berliner, climate variables that influence achievement include: (a) communicating academic expectations for achievement; (b) developing a safe orderly, and academically focused environment for work; (c) implementing swift, effective, and fair ways of handling student behavioral deviancy; and (d) developing cooperative learning environments. All of the above variables tend to promote the positive ethos required to create conditions for effective pupil learning.

Berliner asserts that the available research evidence indicates that when the findings of research on teaching are used to train teachers, student achievement is positively influenced. He contends that the research he reviewed provides a reliable research base for inservice as well as preservice training of teachers.

Inservice Education of Administrators

The continuing education of administrators occurs within degree and certificate programs in colleges and universities. A significant body of descriptive literature exists with regard to the potpourri of courses offered to prepare administrators for American schools. Silver (1982) points out that the majority of students who pursue administrative training and credentials through degree programs have full-time teaching jobs. Data collected from a variety of studies indicate that students in administrative preparation programs are typically local people who have been raised and educated in the vicinity of the university or the college where they pursue their graduate education. Silver notes that relatively few are full-time students.

Silver (1982) points out that programs in the early part of this century for the preparation of administrators typically focused on "war stories." The training of administrators prior to 1940 tended to center on the experiential nature of the job of principal or superintendent as described by retired or practicing administrators who taught administration courses at the college and university level. Since the 1940s and 1950s, administrative training programs have witnessed the introduction of scientific management programs (e.g., management by objectives) with subsequent emphases on human relations, organizational development, behavioral science, administrative theory, and organizational behavior. The competencies that are most frequently emphasized in administrative preparation programs are conceptual and analytical skills. Textbooks, lectures, and discussions tend to dominate the delivery of the program. In a few instances, case studies, simulations, role playing, internships, and field experiences may be used in courses. It is important to note that very little research exists with regard to the *process* by which the continuing development of administrators is carried out. Further, and most important, Silver points out that there is virtually no research with regard to the impact of administrative training programs upon the subsequent behavior of professionals in administrative roles.

The Findings of School Effectiveness Research

The growing body of school effectiveness research in the 1980s has significant implications for the inservice and preservice training of school administrators. Researchers such as Brookover (1981), Edmonds (1979) and Hall, Rutherford, and Griffin (1982) have identified critical variables that differentiate effective schools and principals from ineffective schools and principals. Among the most important of the variables that differentiates effective from ineffective schools is the positive instructional leadership of the principal. It is not known at this time what background, training, or experiential variables are related to effective instructional leadership behaviors. However, many school districts are designing and implementing effective school leadership training programs based on inferences drawn from the research on effective elementary and secondary schools.

The work of Hall, Rutherford, and Griffin (1982) provides insights into the role of elementary principals who are effective change facilitators. Hall and his colleagues have identified behaviors that successful innovators use when implementing new programs in elementary schools. These findings tend to suggest the type of inservice training that might prove to be effective in promoting effective leadership in schools.

Cohen and Manasse (1982) point out that the study of effective principal behavior has resulted in a better understanding of the knowledge base and skills that principals need. Cohen and Manasse note that current preservice and inservice programs fail to provide the appropriate mix of theory and practice that facilitates the development of instructional leadership behavior in principals. Further, they point out that principals need better organizational skills and process skills related to the management of their schools if they are to maximize learning conditions for pupils.

General Evaluation Findings of Inservice Programs

A plethora of evaluation reports is available on inservice training activities that focus on the response of participants to the content and the delivery of workshops, seminars, or activities. In such reports participants are asked to respond to a questionnaire that probes the quality of the presentation and the relevance of the content to one's current job. There is generally no assessment of the content of inservice programs in terms of knowledge outcomes, and typically no attempts are made to evaluate behavior change as a function of inservice programs.

Studies of teachers' perceptions of inservice training programs (see Lawrence, 1982) tend to yield the following data: that teachers judge programs to be effective if they: (a) individualize approaches to the topic; (b) require active involvement of the participants; (c) demonstrate skills to be employed by teachers and provide feedback; (d) involve teachers in the development of the program; (e) proceed in a sequential pattern rather than in "one-shot deals"; and (f) encourage attendance rather than prescribe attendance.

At best, one could infer from evaluative studies that the vast majority of inservice training programs may raise the level of awareness of participants with regard to pedagogical issues, new instructional techniques, program content, and the like. There is ample evidence (Yarger, 1982) to indicate that teachers and administrators will willingly pursue inservice activities provided that they perceive them to be related to their particular job responsibilities.

If one were serious about evaluating the effects of inservice training, then one would have to go far beyond the level of sampling participant perceptions to an immediate experience. A serious attempt to evaluate or research the impact of inservice training would require that measures of the effects of inservice programs on knowledge outcomes or skilled behavior would have to be conducted. Further, and most important, one would have to attempt to measure the effects of what has been learned by teachers and administrators upon the behavior of their clients: students and staff.

With respect to each of these levels of evaluation, as previously mentioned, there is considerable evidence vis-a-vis the perceptions of teachers. At the level of knowledge outcome and behavior change, there is sufficient evidence to support some very clear propositions to guide training and evaluation studies.

Teacher Centers

Teacher centers were one form of teacher inservice education that evolved from the support of the U.S. Office of Education during the 1960s and the 1970s. Teacher centers were designed to provide an opportunity for teachers to come together to direct and pursue their own professional self-development. The teacher center movement grew out of a variety of federal initiatives over a period of time and were designed to improve the quality of teaching in the schools. They were modeled after teacher centers in England.

Studies with regard to the effectiveness of teacher centers report a high degree of satisfaction on the part of teachers. The data (Nemser and Applegate, 1982) suggest that teachers participating in teacher center activities developed a sense of "community" and sharing; they tended to give and receive advice from one another; they practiced teaching techniques on each other in hopes that the techniques would be transferred to more effective ways of teaching students. Nemser and Applegate suggest that the exchange of practical experience among teachers attending a teacher's center is one of the most powerful ways of improving teaching. However, very little evidence exists regarding the impact of the teacher center experience upon changed teacher behavior or the impact of that experience upon student learning.

The Design of Inservice Programs—Lessons from Research

Joyce and Showers (1980) reviewed over 200 studies of inservice training of teachers in an attempt to identify some well defined underlying principles that might guide efforts to improve inservice education. They identified two different kinds of inservice activities: (a) those directed toward the mastery of new techniques and (b) those directed toward fine tuning existing skills of teachers. The results of their review indicate that effective inservice programs for teachers and administrators have the following components: (a) presentation of theory; (b) modeling of the behavior by significant others; (c) opportunities for participants to practice new behaviors; (d) provisions for feedback; and (e) coaching for application of skills. In general, Joyce and Showers found that modeling of behaviors followed by practice and feedback can be very powerful in achieving skill development and transfer of learning to new situations.

Joyce and Showers (1982) have continued their efforts to promote more effective inservice programs by focusing on the coaching of teaching, the fifth dimension identified. The process of coaching is described as one where teachers are given technical feedback by trained professionals who also provide supportive companionship to teachers in their efforts to improve their repertoire of instructional skills. The purpose of coaching is to extend the executive control of teacher instructional behavior. That is, the coach attempts to develop in the trainee, through continuous feedback, the integration of new behaviors into the instructional repertoire of teachers so that the new behaviors become a natural part of the instructional sequence. Coaching also provides an opportunity for a trainer to adapt instruction to the specific needs of the trainee. A significant part of the coaching process results in personal facilitation within a "safe environment" where teachers have an opportunity to practice new behaviors and receive feedback in a non-threatening, non-evaluative environment. Joyce and Showers (1982) found that the opportunity to study the theoretical base and the rationale for the new behavior as part of the process of providing demonstrations, practice, and feedback tends to enhance the effectiveness of inservice training. They identify coaching as the key to the transfer of new skills into the active repertoire of a teacher. Finally, Joyce and Showers stress that teachers must organize themselves into groups to support one another in order to promote the development and acquisition of new skills or to fine tune existing skills—this is particularly important if they are to achieve effective transfer to daily instructional practice in the classroom.

Guidelines for Inservice Training of Teachers and Administrators

In addition to the research of Joyce and Showers, one can also turn to the literature on adult education and on adult development as a source of guidance for inservice training. Knowles (1973) advises inservice educators to look to the discipline of andragogy for guidance in the development of adult learning experiences. The field of andragogy deals with adult development and how adults learn when compared to the way that adolescents or children learn. One of the more significant findings from the field of andragogy indicates that adults typically have a deep psychological need to be perceived by others as being self-directed. Thus, adults should be involved in significant ways in planning the experiences that are to guide their self-development. Further, they must be allowed sufficient opportunities to individualize learning experiences in order to increase the likelihood of positive learning outcomes.

Knowles (1973) points out that experiential learning techniques that draw upon the experience of adults and use experience as a resource for learning are likely to be the most effective. Adults generally perceive active learning experiences that are characterized by discussion, simulation, field experience, team projects, and action learning techniques as more effective than passive learning experiences.

Much of the theory that guides adult learning comes from psychotherapy. Rogers (1962), Maslow (1962), and others support the notion that adult development is a continuing process of becoming. To a child, experience is something that happens to him or her. To an adult, experience is what that person is! Thus adult learning should be experiential in nature, drawing upon the life experiences of adults while engaging them in new experiences.

Knowles further identifies enhancement of self as one of the forces that creates a positive condition for adult learning. It should be noted that some adults engage in self-development learning as a social experience, engaging in activity with others for the mere joy of being with others. Finally, goal orientation and goal fulfillment are perhaps the most powerful forces in fostering adult learning. Adults who wish to achieve professional or personal goals in life through acquisition of knowledge and skills possess the intrinsic motivation to drive them to achieve those goals. These factors dealing with the active experiential nature of adult learning, the need for self-direction, and the goal orientation of adults must be taken into account in planning inservice training of teachers and administrators.

Summary and Implications of Research Findings

Although Lanier (1984) concludes that studies of the "curriculum" of initial and continuing teacher education are fragmented and shallow, some progress has been made. Both Berliner (1984) and Lanier acknowledge that teacher effectiveness studies have demonstrated that teachers can acquire new knowledge and skills. However, Lanier contends that the emphasis in these studies is that continuing teacher education is dominated by skill mastery, which implicitly tends to reinforce the notion that little knowledge is required to be a good teacher.

A similar body of knowledge does not exist with regard to the continuing education of school administrators. However the school effectiveness literature that identifies the role of the principal in producing the positive ethos that leads to increased student achievement holds some promise for future research and development.

There is no question that a vast amount of inservice training of teachers and administrators goes unresearched and unevaluated. Local, state, and regional agencies conduct untold numbers of training sessions annually. As Yarger (1982) points out, there is a lack of specific language that might enable one to study the area constructively.

However, there are sufficient guidelines from research to enable the profession to improve the quality of inservice training of teachers and administrators. If we consider the proposition from andragogy that the adult need for self-direction is a powerful variable, then we must provide opportunity for self-direction in the planning and implementation of inservice programs. Additionally, if we recognize that active involvement as opposed to passive engagement increases the effectiveness of training for adults, then we must ensure that adults are actively engaged in the learning process. And finally, if we develop the design of inservice training from the research of Joyce and Showers (1980), then we will ensure that there are opportunities for: presentation of theory; modeling of new techniques; practice of new behaviors; and feedback on practice. If we apply the above, then we increase the likelihood of providing effective inservice training for teachers and administrators.

THE PITTSBURGH PLAN

Assessing the Needs of the District

In September, 1980, the author assumed the Superintendency of the Pittsburgh Public Schools and perceived a need to focus the attention of the Board of Education on the district's problems that were of greatest concern to them. This need was judged to be important if the author was to have an opportunity to provide effective educational leadership for the district and if the Board, the staff, and the general public were to develop a sense of movement toward the resolution of the district's problems.

The author initiated the design of a Needs Assessment Survey that was conducted by Dr. William Cooley (1981) and his staff at the Learning Research and Development Center, University of Pittsburgh. The survey was developed and pilot tested in October, 1980; the full-scale community survey was completed by the end of November. The data were analyzed in December, 1980, and presented to the Pittsburgh Board of Education in January, 1981. The Needs Assessment Survey took two forms: (a) a survey to identify the perceptions of the improvable conditions in the district from a wide array of persons, both within the broad community and within various district employee groups; and (b) an analysis of existing data that might shed additional light on problems identified through the survey.

The broad based district and community survey, termed the "dynamic survey," sampled the perceptions of employees in the district, including but not limited to clerks, custodians, teachers, administrators, and board members. Business and community leaders, parents of children in the public schools and private schools, as well as the public at large, were also surveyed. The "static survey" dealt with the analysis of data available from the records of the Board of Public Education. These data included such indicators as pupil attendance records, student achievement, teacher absenteeism, and the like. The purpose of this static survey was to see what, if any, relationships existed among the data that might be useful in the Board's priority setting and the district's educational improvement planning.

Board Priorities

In January, 1981, the Board of Education met in an all-day session to review the data from both surveys. Following the data presentation, the Board deliberated and reached consensus on two major priority areas: School Improvement and Cost Effective Management. In the area of School Improvement, the Board further identified six school improvement priority areas: (a) improving student achievement; (b) improving the effectiveness of personnel evaluation; (c) managing enrollment decline; (d) improving the ability of the district to attract and hold students; (e) improving the quality of school discipline; and (f) improving the performance of low-achieving schools.

In February, 1981, the Pittsburgh Board of Public Education, in its formal legislative session, voted these priorities as the primary agenda of the school district. The Board also charged the administration to develop and submit plans to address each of the areas listed in the priority statements by July 1, 1981. Those plans were delivered in July, 1981; the Board of Education took the summer to review them. In September, 1981, the Board formally approved the priority plans as submitted.

One of the major initiatives undertaken to address the Board's priorities will be presented: Pittsburgh's Research-based Instructional Supervisory Model (PRISM).

IMPROVEMENT AND EVALUATION OF INSTRUCTION (PRISM I)

Personnel evaluation was established as the district's second highest educational priority. In so doing, the Board of Education reflected its own views as well as those of community members and school district employees. Essentially, the survey data revealed that respondents believed that too many teachers and administrators were not performing their duties effectively, a condition that needed to be corrected.

The superintendent perceived that two alternatives were available to respond to this priority. The first alternative was to use the existing evaluation systems and embark on a "witch hunt" to identify ineffective personnel and then demote or discharge them. The second alternative was to seek to increase the quality of supervision and evaluation and to improve the performance of *all* personnel in the district. This latter approach would require that the performance expectations for all personnel be carefully detailed and that persons be observed and provided with structured feedback to improve performance.

The first alternative was clearly punitive in nature and was likely to produce a negative response among teachers and administrators. It probably would have created an atmosphere of negativism that would have proven detrimental to the more positive improvement thrust of the Board. The second alternative, on the other hand, is improvement oriented and is designed to make good teachers and administrators better, while at the same time identifying those who need significant improvement. The latter approach would still induce some anxiety among teachers and administrators; yet it could be approached with a constructive spirit and provide persons with an opportunity to improve their performance. The latter approach places professionals in a helping relationship with respect to each other to bring about positive improvement.

This more constructive approach was selected to improve personnel evaluation procedures and the general level of professional performance in the district. The plan became known as PRISM. At present, there are three variants of PRISM in operation and a fourth in the planning stage. PRISM I is concerned with providing a consistent framework for the description, observation, improvement, and evaluation of instruction at all levels in the district. PRISM II is directed toward improving the instructional leadership behavior of principals, supervisors, and central office administrators. PRISM III is the district's effort to improve the quality of secondary education. PRISM IV is the elementary school version for the renewal of teachers and administrators. (PRISM IV will be discussed in only a limited way in this chapter.) All four PRISM programs are designed to improve the effectiveness of instruction, supervisory leadership, and personnel evaluation and thus lead to a higher quality of student learning in the district.

Assumptions

PRISM I is based on the following assumptions: (a) personnel evaluation will be enhanced when teachers, administrators, and their evaluators are engaged in a dialogue that focuses on clear communication of expectations for job performance; (b) a consistent framework of effective teaching based on research findings exists and it can be taught, learned, and applied; (c) teachers, administrators, and supervisors can be trained to observe performance, gather evidence with respect to that performance, and provide structured feedback that will cause that performance to be improved; and (d) if teachers and administrators are unable to improve their performance after careful role clarification, reasonable observation and feedback, and specific training, then action must be taken to terminate their employment.

Components

There are four essential components of PRISM I: (a) knowledge training; (b) skill development; (c) follow-up coaching; and (d) peer networks. The knowledge base of the model is derived primarily from the work of Madeline Hunter. Where appropriate, other research findings have been introduced to augment the model. Skill training focuses on the development of the ability to take anecdotal records of observations, records that are as close to verbatim records as possible. They are to be used in planning and carrying out the conference with the teacher. This aspect of the model is a variant of the Clinical Supervision model developed by Cogan (1973) and Goldhammer (1969). When elements of effective teaching are introduced, principals are given the opportunity to apply that knowledge by planning and conducting a lesson for their peers. They are observed and provided with structured feedback as a means of internalizing that knowledge while they simultaneously further the skill development of note taking, conference planning, and conferring.

Follow-up coaching is probably the most critical component of the model. At least once every four to six weeks each principal is visited by a "coach." The visit is designed to provide an opportunity to jointly carry out an observation and conference, review aspects of the model that need clarification, analyze the monthly log of the principal, and plan for future developments related to an individual principal's needs.

Establishing networks of colleagues was one of the major developmental efforts for PRISM I during the 1983–84 school year. The ongoing acquisition of knowledge and skill required for effective leadership in the schools dictated that principals meet periodically in support groups. The support groups were designed to allow for peer interaction to stimulate the further development of knowledge and skills to improve instruction. It is assumed that each principal has some knowledge or skills that can be shared with others and thereby contribute to the common good.

Development

The superintendent convened a task force of teachers, administrators, and central office personnel in March, 1981. That task force was charged with the responsibility to develop a plan that would address the Board's priority of personnel evaluation. The task force spent four months reviewing a variety of approaches to personnel development and evaluation. It recommended to the Board that the district adopt and implement a modified version of an instructional model developed by Madeline Hunter

(1978) and a clinical supervision process as the vehicle to address effective performance by teachers.

The model was adapted from similar program developed for the Norfolk, Virginia Public Schools by Dr. Theodore Forte. Forte had modified the Hunter materials to meet the needs of his district. He was retained as a consultant by the Pittsburgh District to train a team of four staff development associates appointed by the Board to address this priority area. The four staff development associates were selected from the ranks of the district's principals and central office personnel. The staff development team was trained initially by Forte, and subsequently by other educators well experienced with the Hunter model; they were assigned to train all administrators and teachers in the district in the PRISM model.

How it Works

Beginning in September, 1981, all administrators in the district were required to attend thirty hours of training on the PRISM model. All central office administrators, including the Superintendent and Assistant Superintendents were trained. By the end of the 1981–82 school year, all principals and supervisors had received initial training and were using PRISM with selected staff to become more skillful in using the model. In the summer of 1982, the principals taught a special two-week summer session for students. This summer school provided them with an opportunity to teach students while using the instructional model. As they taught, they were observed by their peers and received feedback from them regarding the effectiveness of instruction. This provided a mechanism through which both instructional and supervisory skills could be refined simultaneously.

During the 1982–83 school year, all principals were expected to conduct a minimum of three observations and follow-up conferences per week. They were required to keep records of the observations. These included the subject and grade level observed, the focus and style of the conference, and the specific improvement strategy. The data describing these observations were carefully monitored by the staff development team. Additionally, each of the staff development team members was assigned a specific number of principals for whom he or she was responsible. These staff development associates functioned as coaches for the principals, and were required to co-observe and co-conference with them at least once a month to ensure that the principals had internalized and operationalized the instructional model effectively.

PRISM reflects the first segment of the response to the Board's priority regarding effective personnel evaluation. It has established the criteria for effective instruction. PRISM I has provided principals with specific classroom observational skills including anecdotal note taking, analysis of notes to obtain specific data for the teacher conference, conference planning, and conducting conferences to promote instructional improvement. All of this was done in a method whereby the administrators were required to go through a plan-teach-observe-confer cycle at each stage of training. This was done in order that they would internalize the model through actual practice. The program was focused on improving performance in instructional observation and conferencing skills as well as on increasing knowledge.

Results to Date

PRISM I has been in operation for three years. During the first year, principals and supervisors were trained in the fundamentals of the PRISM Model and given guided practice in its application. Emphasis in the first year was placed on developing the knowledge of effective instructional skills as well as performing instructional observation analysis and conferring skills. Principals were asked to work with a few selected teachers and to concentrate on observing and conferring directed toward the reinforcement of effective teaching techniques. This was done to provide a positive experience for both teachers and principals. Over time, principals were provided further training and they extended their skills to conduct all types of teacher conferences.

A survey conducted by Salmon-Cox (1983) provided formative evaluation data to the Staff Development Team. The general results note a high level of enthusiasm for the program. The data indicate that the principals are taking the program seriously. Many constructive suggestions were offered by the principals to improve the efficiency of the program. One of the most salient findings of the survey compared responses of principals in 1980 and 1983 with respect to criteria for teacher evaluation. As part of the needs assessment survey, the principals responded to the following question: "A serious problem I face is a lack of good criteria by which to evaluate teacher instructional effectiveness." In 1980, 87.5 percent of elementary principals, 50 percent of middle school principals, and 71.4 percent of secondary principals agreed that this was a problem. In 1983, only 13.3 percent of the elementary principals, 6.7 percent of the middle school principals, and 25 percent of the secondary principals responded that this was a problem.

IMPROVEMENT OF INSTRUCTIONAL LEADERSHIP OF ADMINISTRATORS AND SUPERVISORS (PRISM II)

PRISM II is the District's program to improve the instructional leadership skills of principals, supervisors, and central office personnel. PRISM II has been developed because most principals have not been trained as instructional leaders. Degree and certificate programs for administrators have tended to focus primarily on the management aspects of schooling. Many administrators are not prepared to cope with the current emphasis on instructional leadership. Not only has their training failed to prepare them to assume this role, but also, most school boards and school districts have not expected them to provide instructional leadership. PRISM II was developed to ameliorate this problem.

Assumptions

PRISM II is based on the following assumptions: (a) instructional leadership can be defined, implemented, and evaluated; (b) all principals can become instructional leaders; (c) most principals will need substantial training in order to develop the knowledge base and the skills necessary to provide instructional leadership; and (d) the process of developing instructional leadership can be facilitated by establishing networks of administrators working in colleagueship.

Components

PRISM II overlaps significantly with PRISM I. At this time, the District is still working to define the concept of instructional leadership and to develop a framework of the knowledge and skill components necessary to develop a long-range plan. The training workshops and the coaching of PRISM I serve as the foundation for PRISM II. The knowledge of the components of effective instruction and the skill in observing and improving instruction are the cornerstones for instructional leadership. Beyond PRISM I, however, principals and other administrators must have a knowledge base with regard to curricular models and instructional techniques. Principals need to know enough about organizational development and the educational change process to furnish an environment for teachers that is likely to produce a focus on instruction.

The Pittsburgh School District has provided summer workshops for principals covering such topics as the role of questionning techniques in improving instruction. Workshop time has been devoted also to the development of school-based plans for the instruction of faculty members in the components of PRISM I.

Currently a committee of principals, supervisors, and central staff is working with the staff development team to: (a) implement a curriculum and communication component of instructional leadership; (b) create a system of networks to provide support for principals; and (c) establish a resource bank of professionals who can assist in the leadership training process.

Plans are now being developed in collaboration with school administrators in Allegheny County (in Southwestern Pennsylvania) to implement a Principals Academy that will serve the entire region. The academy will serve some of the instructional leadership needs of Pittsburgh city administrators.

Unfortunately, instructional leadership remains a somewhat elusive concept. It is easy to identify instructional leadership when one sees it; one also knows when it is not present in a school. While there is a considerable body of literature with respect to leadership per se and a vast body of literature with respect to curriculum and instruction, the roles of principal and superintendent as instructional leaders remain basically unresearched and in need of more complete definition, development, and documentation.

Results to Date

Data gathered with respect to the implementation of PRISM II indicate that over two-thirds of principals in the district have embraced and put into operation the concepts implicit in the model. The final third of the principals are still struggling with many aspects of the model. Significant growth in acceptance and effective implementation of the model occurred during the 1983–84 school year. Administrators have been evaluated over the past three years on the extent to which they have cooperated with the staff responsible for the PRISM I program. Evaluation systems have been developed to rate principals on the effective implementation of PRISM in their schools especially as they relate to student achievement. The results also indicate that we need to provide more effective ways for principals to process and use information that informs them of the instructional activities occurring at their school. This may require different formats for presenting information and additional training in the use of data.

THE SCHENLEY HIGH SCHOOL TEACHER CENTER (PRISM III)

The Schenley High School Teacher Center is the Pittsburgh School District's response to the Board of Education's priority to increase the effectiveness of instruction at the secondary level. It also reflects the district's need to reduce the high school drop out rate. In 1980, 35 percent of the students who entered grade nine in 1976 failed to graduate from grade twelve. Even more startling was the fact that 28 percent of ninth graders failed to achieve sufficient credits to become bonafide tenth graders. These problems demanded attention.

Plans to improve the effectiveness of instruction at the secondary level and to improve the district's ability to keep students in school resulted in the development of a proposal to the Board of Education that one secondary school become a teacher center. The plan was to create a "model" secondary school for teaching and learning for the district (Wallace, Young, Johnston, Bickel and LeMahieu, 1983). Further, it was proposed to the Board that all secondary teachers in the district be provided with a "mini-sabbatical" at this model school that would be designed to improve their teaching skills and update their knowledge of their academic field. The plan called for the Board to restaff this school with the most able teachers in the district. The plan was approved by the Board and the Schenley High School Teacher Center was initiated in 1982. Intensive detailed planning for one year paved the way for the Center's opening in August, 1983.

Teacher Center Goal

The primary purpose of the Schenley High School Teacher Center is to provide a teaching and learning experience for each secondary teacher in the Pittsburgh Public Schools. Teachers have an opportunity: (a) to observe exemplary instructional activities in a real setting; (b) to sharpen their current instructional skills by practicing new instructional techniques; (c) to receive clinical feedback on that practice; (d) to translate theory into practice; (e) to receive an update in their specific subject matter areas; (f) to review the latest research findings in effective teaching; and (g) to obtain a broad perspective of modern youth culture and to understand its implications for effective teaching.

A secondary purpose of the Teacher Center is to provide an opportunity for teachers to engage in independent study and to create something that will be useful to them in their home schools. Opportunities also are provided to engage in externships with business, industry, or higher education to provide an enriched background for teaching.

The Schenley High School Teacher Center provides a realistic site in which teachers can teach and learn. The program for students is one that could be replicated at any other high school in the Pittsburgh Public Schools. The current program offerings, both regular and magnet, will be maintained and expanded in terms of the quality and variety of instructional techniques. New magnet programs have been launched in high technology and international studies to provide exceptional educational opportunities to students throughout the city and to promote the voluntary desegregation of that school.

Assumptions

The Teacher Center program is based on the following assumptions: (a) that secondary teachers can be engaged in a "clinical experience" that will cause them to reflect upon and to improve their teaching techniques as they observe other teachers, analyze instruction, teach, and receive feedback on their own instructional techniques; (b) that educators can develop an instructional dialogue that will tend to break down the professional isolation experienced by most secondary teachers; (c) that when teachers are provided opportunities to participate in lectures and seminars, they will upgrade their skills and knowledge in their content areas; and (d) that by participation in seminars on adolescent development and related topics, teachers will gain greater understanding of and increased skill in dealing with today's urban youth.

Components

The general structure of the teacher's experience includes three phases: (a) orientation; (b) direct involvement; and (c) reinforcement and support.

The first phase (orientation) is conducted by members of the Schenley High School Teacher Center staff in conjunction with individual teachers, building principals, and supervisors in the sending school. This phase involves the identification of each individual teacher's needs and the generation of an individualized study plan for each teacher within the parameters of the program's components. It is intended that these plans will reflect both the individual teacher's and the home school's needs.

The second phase (direct involvement) has been based on an extensive needs assessment of the secondary teachers. It takes place at the Teacher Center. It includes but is not limited to the following:

1. Participation in seminars with peers and center staff, as well as university, business, and industrial personnel;
2. Involvement in a clinical experience, including observation of effective teaching, planning, actual teaching, and conferences;
3. Fulfillment of individual study plan requirements that may include working with university, community, and business resources;
4. Training in appropriate new technologies, including use of instructional media and computers.

This phase occurs over an eight-week period aligned with one of the four quarters of the school year. Specially trained replacement teachers teach the classes for the visiting teacher while he or she is at the Center.

The third phase (reinforcement and support) occurs at the home school. The purpose of this phase of the program is to ensure the retention of and to support the teachers in the use of the skills and knowledge acquired at the Center. This assistance will be a responsibility shared by the Center staff, the home school, and other staff, all of whom will have been appropriately trained.

Staff

The staff of the Schenley High School Teacher Center is among the best in the School District. All are fully-certified secondary teachers who either applied for or were recruited for their positions. A prerequisite for appointment was a willingness to make the commitment to the overall objectives of the Teacher Center. The full cooperation of the Pittsburgh Federation of Teachers was important in bringing about a successful opening to the school.

The entire staff received intensive training and practice in the principles of effective instruction. Some resident teachers teach a reduced load of four classes and, in the remaining time, teach a series of seminars on adolescent development, orient teachers coming to the Center, monitor research activities of peers, serve as a model of exemplary teaching, supervise the clinical component of the Teacher Center, and perform conventional faculty duties.

One third of the resident staff serve as Clinical Resident Teachers. Each clinical resident teacher works with two visiting teachers in the "teaching clinic," which is based on the district's model of effective instruction (PRISM). In this phase of the training, the visiting teachers assist in developing lesson plans, observe effective teaching, and have an opportunity to practice the model. The clinical teacher then provides them with structured feedback.

The on-site Center staff is assisted by a cadre of 48 replacement teachers. These teachers are fully certified professionals whose teaching specialities represent the subjects offered at the secondary level. In the home schools, they replace those teachers who, for the period of eight weeks, are taking part in the Teacher Center program as visiting teachers.

Results to Date

Although the Teacher Center program is just beginning its second year of operation, several important trends in the data gathered thus far are noteworthy. For example, significant numbers of teachers across all cycles sampled, report important personal and professional accomplishments as a result of their time at Schenley. Areas of professional accomplishment include growth in their instructional skills, increased confidence in their teaching ability, and expanded knowledge in their academic area of teaching. Major trends reported as personal accomplishments by teachers included a renewed sense of enthusiasm for teaching, an increased sense of professionalism, and an enhanced pride and appreciation of their colleagues in the district. If one could identify the single strongest trend in these data, it would be this sense of teachers broadening their horizons by working with their peers on professionally significant tasks. These teacher self-report data have been confirmed in many instances by informal observations and comments made by principals and supervisors who work with teachers on follow-through activities. It is clear from the data that returning teachers are playing significant roles in inservice programs for teachers in their home schools. Principals are viewing returning teachers as important resources to their own efforts in improving educational practices in their buildings.

In order to assess whether the self-reported teacher impact holds up over time, a sample of teachers who participated in the second and third cycles of the first year of the program were interviewed. The interviews took place approximately two to four months after the completion of their cycle. Thirty-nine teachers were interviewed, representing over 40 percent of the teachers participating in those cycles. Over 90 percent of those interviewed reported significant professional accomplishments resulting from their experiences at Schenley. Many respondents went on to describe how techniques and concepts learned at Schenley were now being used in their own classrooms.

Of course, change does not come without some stress. Data collected from teachers clearly give evidence of anxiety among teachers prior to coming to the Center. Further, feedback from individual teachers participating in cycles has been invaluable in assisting program managers in fine tuning components of the program. One important issue that surfaced in this regard concerned the need to strike a balance between district-prescribed versus individual teacher-identified activities. One trend in evolving the program has been to provide increased opportunities for individual teachers to identify and address specific professional needs.

Data gathered from a survey of students at Schenley High School tend to confirm a higher degree of expectation for their learning and increased homework demands. The students express positive reactions to the "new" climate in the school.

The student survey was repeated at the end of the first year of the Center and the findings corroborated the earlier findings. Students reported higher expectations than in the past, greater concern for learning on the part of new teachers, and a greater emphasis on attendance and participation in school and classes. This new climate manifested itself in a considerable increase in student achievement in the school. In 1983, only 28 percent of students in the school scored at or above grade level in reading and 27 percent in language arts. Following the first year of the Schenley High School Teacher Center, those proportions had increased to 37 percent and 58 percent respectively.

The Schenley High School Teacher Center is one of the major efforts in staff development of the Pittsburgh School District. It is an outgrowth of the Board of Education's priority for school improvement. The structure of the program is consistent with the PRISM I and II programs designed to promote instructional effectiveness in teachers and instructional leadership skills in administrators. A specific program of school improvement in seven Pittsburgh elementary schools is also consistent with the general goals of Schenley High School Teacher Center program. Through the Schenley High School Teacher Center and other related programs, the Pittsburgh Schools provide a coordinated intervention strategy designed to promote more effective teaching and learning in the city schools.

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XII

Quality Control of Teacher Preparation Programs Through the Program Approval Process

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In the past 25 years there has been a remarkable change in the process by which states approve teacher education programs that lead to certification. In the 1950s it was quite common for colleges to consult the list of state certification regulations, to develop a set of college course titles that matched those requirements, to send the list to the state department of education, and to obtain instant approval. In that period there was, generally speaking, no Office of Teacher Education in the state department of education, little or no teacher education staff, few state standards for the approval of teacher preparation, and no process for on-site evaluation of programs.

In recent years, states have recognized their responsibilities for assuring the public that the people who are permitted to teach have the kind of preparation the public expects of a beginning teacher. Howsam (1982) has pointed out that:

> [T]his control over the process of teaching and institutions preparing its personnel ... [is] ... well established in both custom and law and widely accepted by lawmakers, courts, educators and citizens. It is the pervasive—if not too well understood—reality of education as it is organized and operated in this country. Lay state boards have responsibility *both* for the schools which deliver education opportunity and for the teaching profession which provides education services within them. At their discretion they may delegate more or less of their responsibility to local school systems, to the

> teaching profession and to the colleges and universities. In so doing, however, they do not give up either their rights or their responsibilities. (p. 4)

One well established principle of law is that education is a state function, and there are many examples of state boards of education using their authority to correct matters that concern them. Typical, recent examples of these concerns can be seen in declining test scores, conditions in the schools, and more recently, teaching and the teacher preparation programs.

THE EVOLUTION OF STATE STANDARDS

In the 1950s, the U.S. Office of Education authorized the development of what was known as Bulletin 351, which was the first set of state program approval standards formulated with the cooperation of 50 professional societies and organizations. Through the past 30 years, these standards have been revised constantly and improved by the National Association of State Directors of Teacher Education and Certification (NASDTEC) so that today we have a full complement of standards titled *Standards for State Approval of Teacher Education (1983 Edition)* (NASDTEC, 1983).

These standards address such concerns as the organization and administration of student admission requirements, retention standards, exit requirements, and follow-up policies, as well as standards in general education, professional education, and separate standards for each of 27 different teaching fields. NASDTEC engages in an on-going process of revising these standards through the involvement of the pertinent professional organizations and state department of education specialists.

The standards are written in program terms, rather than in terms of a set number of courses or credits. This makes it possible for colleges to have considerable latitude in designing their programs and still provide for the needs of the beginning teacher. This point is often not understood by those who criticize what they would like to believe is a strict set of course requirements for state approval of teacher education programs. In fact, many states actually encourage colleges to design programs that meet standards but which deviate from traditional state certification credit count regulations.

THE PROCESS OF EVALUATION

I have explained the evaluation process that existed 30 years ago, but the process is quite different today (Behling, 1976). In the present process, a college prepares a self-study report that addresses the various standards, including the standards for the individual teaching fields. A team of professionals, mutually agreed upon by the college and the state department of education, arrives on campus for an extended visit to examine the individual programs. This is an important point, for the philosophy here is that a generalist cannot adequately evaluate all the secondary teacher preparation programs. It takes a specialist with a specific set of standards to do the job adequately.

After the evaluation team has conducted its on-site evaluation, it writes a report that addresses every standard for every program, and the decisions concerning each program are then rendered by the state board of education or the state superintendent of schools.

THE STATE DEPARTMENT STAFF IN TEACHER EDUCATION

The development of this process has engendered very important improvements in the staff of state departments of education. Indeed, staff members in recent times possess credentials roughly equivalent to those found in the best college teacher preparation faculties.

With the appropriate backgrounds, including doctoral degrees and experience in public schools and colleges, these people can assist colleges in the design of their programs, provide information about administrative policies such as admissions requirements, and serve as a resource to the various members of an evaluation team. Many college teacher education programs are poorly funded, and their faculties appreciate the consultant work that can be done by a well qualified state department of education specialist in teacher education.

CERTIFICATION IN GENERAL

The author of a recent national report referred to teacher certification as "a mess" (Feistritzer, 1984). If one were to expect teacher certification to be a simple-minded process by which any college graduate could teach any class in the public schools, then one would fail to recognize the tremendous complexity associated with effective schools and effective classrooms. If we have learned anything from the extant research, it is that teaching requires a sophisticated set of skills that are contextual, for their appropriate application varies from situation to situation.

In light of the need to address the various teaching roles, states have generally studied these roles carefully and have tailored the requirements to the specific teaching tasks. It would be silly to say that a kindergarten teacher's preparation should be the same as a high school chemistry teacher's—either in terms of content or professional teaching skills.

Because education is a state function, it follows that each state has devised its own requirements for certificates; however, there is a remarkable similarity among the various states. While there may be a few isolated cases of proliferation of certification categories, states generally have designed their requirements to be reasonable and yet to achieve the goal of putting quality people in the classrooms (NASDTEC, 1984).

THE RECIPROCITY SYSTEM

For more than 25 years NASDTEC has been struggling with the problem of helping teachers move across state lines with the least amount of difficulty (Lindsey, 1973). The Northeast States entered into an informal agreement in the 1950s to accept elementary teachers prepared in any of the other 10 states in that region. Various systems have been devised over the years, but the first true national reciprocity system was developed as a result of the Interstate Certification Project. Dr. Helen Hartle traveled all over this country in her pioneering effort to convince state legislatures and state superintendents of schools that they should develop a system that would provide for true reciprocity and that would make the certification of teachers across state lines easier, more manageable, and more accessible.

The process provides for each participating state to pass the same enabling legislation, thus creating a compact. This legislation authorizes the state superintendent of schools to enter into a contract with any other state superintendent of schools to grant a certificate in the receiving state. The certificate is an initial teaching certificate that is given even if the teacher does not meet the credit requirements of the receiving state. The critical element is whether the teacher has completed a *state approved program* in the sending state. This system also provides for experienced teachers, under the appropriate circumstances, to take their certificates on which they have taught in one state and receive a comparable certificate in one of the participating states.

At the present time, 37 states have passed the enabling legislation that would make it possible for a person completing one of our Maryland State Department of Education approved programs to be granted a certificate that is comparable to our beginning teaching certificate in another state. Although we have this large reciprocity program, there still are those individuals who have difficulty in obtaining certificates in other states, but they are usually people who have not completed an approved program in one of the participating states. Therefore, many states have seen the need to retain the process of credit count to make it possible for those who have not completed an approved program to obtain a certificate in a receiving state.

The reciprocity system was first implemented in 1969, and the states have just completed the signing of the fourth cycle of five-year contracts through the Interstate Certification Contract Administrators Association.

WHAT IS THE QUALITY OF STATE-APPROVED PROGRAMS?

There was an analysis of 10 years of college evaluation reports resulting from the state evaluation teams that examined 224 undergraduate programs and nearly 50 graduate education programs in Maryland (Champion, 1982). The first cycle of these evaluations was conducted from 1971 to 1976 and the second cycle from 1976 to 1981. This report shows the growth of the process of state evaluation of teacher preparation programs, the sophistication of the colleges in developing their self-study reports, and the professionalism of the teams responsible for conducting the on-campus reviews. During the second cycle mentioned above, 44 programs received five-year approvals and a number of programs received no approvals at all.

The changes that occurred during the 10 year period are too numerous to mention, but a few will illustrate the effects of the evaluation process.

1. Seventy-five percent of the programs showed an increase in the number of field experiences provided since the initial evaluations.
2. Fifty-five percent of the evaluation reports noted an increase in the variety of early field experiences provided in the professional education curriculum since the initial evaluation visits.
3. Sixty-five percent of the institutions increased the length of the student teaching practicum.

To verify the findings of the study, the investigator also interviewed deans and directors of the college teacher preparation programs to gain their perceptions of the changes that occurred in their teacher education programs during this time period. The deans noted that they had:

1. Restructured their teacher education programs.
2. Added courses to programs or shifted emphasis in courses to meet the NASDTEC standards.
3. Increased field experiences throughout the professional program.
4. Provided for the active involvement of advisory committees in teacher education.
5. Lengthened the student teaching practicum.
6. Outlined specific criteria for admission to teacher education, which were often expanded beyond grade point average.
7. Structured a more comprehensive general education component.
8. Increased staff, facilities, and other resources for teacher education.

And how did the colleges feel about the state department of education and its staff? The report says that "they generally applauded the fairness of the program approval process and the human relations skills of the Teacher Education and Certification Branch" (Champion, 1982, p. 13). The report concludes by stating that the decade of on-site evaluations brought changes in both the *quality* and *quantity* of experiences in professional education programs. Regrettably, there are still those individuals who will look at these changes and, because they do not understand the complex nature of being a teacher and the doubly difficult task of preparing a competent beginning teacher in a four-year program, will fail to recognize the significant achievements these evaluations have brought about (Champion, 1982).

A recent follow-up study by a major teacher preparation institution asked principals and supervisors of first-year graduates of approved programs to rate those beginning teachers in terms of their classroom effectiveness according to certain specific categories. The study's major purpose was to obtain information about the quality of those beginning teachers' teacher education experiences. Fifty-one first-year teachers and their supervisors participated in the study. Supervisors and principals were asked to rate those teachers on ten specific skills that were goals of the teacher preparation program, and those items were rated on a five point scale, with five being "outstanding," 2.5 being "average," and zero being "non-existent." How did the supervisors rate the graduates of those approved programs in comparison with other teachers they had supervised? The average across all ten goals was 3.7, slightly below a 4, which had been labeled "highly competent" (McCaleb, 1984). This accomplishment is extremely positive and encouraging in light of the recent criticism of teacher preparation programs.

THE NCATE PROCESS

The National Council for Accreditation of Teacher Education (NCATE) is a body that was created by six national professional education organizations in 1951–1952. Since 1954, NCATE has accredited college teacher education programs across the country, and the recent Feistritzer (1984) report indicated:

> NCATE accredited 527 institutions preparing teachers in 1983. . . . Seventy-eight percent of the public colleges and universities training teachers reported having NCATE accreditation, whereas only a little over one-third of the private ones did. Almost eighty percent of the institutions with enrollments in excess of ten thousand are accredited by NCATE compared with only 20 percent of the colleges enrolling fewer than one thousand students. (p. 33–34)

Over the years there have been many discussions and criticisms of NCATE, with groups asking such questions as, "How can a Washington-based council with a small staff adequately conduct so many evaluations all over the country?" Also, there have been many questions about the constituent organizations and the control of NCATE.

Let us look at three important aspects of the NCATE evaluation process: (a) the standards, (b) the composition of the teams, and (c) the resulting approvals.

NCATE developed a process that did not apply program specific standards in its review. That is, a single set of standards has been used for the in-depth analysis of the academic content of all the teaching fields leading to certification. For example, the teaching fields of English and art are quite different, and to apply one set of non-specific standards to both programs would be an impossible task for an evaluator. To assure that these programs contain the appropriate content for a prospective teacher requires program specific standards.

Let me take the example one step further. The standards for an English program should ensure the study of a balanced program of literature and language. The latter is often missing from a teacher's preparation. However, with specific program standards, it can be assured that the prospective English teacher will receive preparation in the areas of linguistics, grammar, composition, and the structure of the English language. The same kind of illustration could be given for the prospective art teacher.

The approach that NCATE traditionally has used has been quite different from the state approval process, which has specific program standards for each secondary teaching field. In this program specific process, each program must stand alone in terms of meeting standards. In addition, each program must meet the general and professional education requirements that are common to all programs within an institution.

Recently NCATE has been in the process of reexamining its program approval process, and a proposal has been made for NCATE to discontinue the evaluation of specific teaching fields and to concentrate on the review of general education and professional education. However, there are those state officials who have questioned the need for NCATE to examine these aspects of teacher education programs when they have previously been thoroughly evaluated by state teams.

One of the important points to be made about an institutional evaluation is the willingness of the team and the approval agency to have the strength of character to address very difficult issues when standards are not met. It is unfortunate that, in some instances, an NCATE team has approved the standards for every program in an institution, but the state would not grant program approval to that same institution.

Because NCATE has used one set of standards for all secondary teacher preparation programs, teams usually have been quite small, and one team member may be required to evaluate the art, music, social studies, and other teacher preparation programs. This, of course, would not happen in the state approval process which I have described previously, for state teams in most states contain at least one specialist for each program being evaluated.

A serious flaw of the NCATE process is that an evaluation team may have only one evaluator to examine most aspects of the professional education component. Further, the person having that responsibility is often not prepared to make the necessary evaluative judgments. For example, a classroom teacher who has no experience in a college teacher education program and has no prior experience serving on a college evaluation team should not serve in this role. However, it has happened.

Because all secondary teacher preparation programs are approved by NCATE in the aggregate, a decision must be made about whether approval will be given when there are many fine programs and one or two weak ones. This, of course, would not happen with a state approval model, where each program is approved individually.

This process of approving "programs in the aggregate" becomes very serious when we recognize that many years ago some states placed in their certification regulations the provision that they would grant a certificate to any person who completed an NCATE approved program. The problem for state departments of education in issuing these certificates is that they may be issuing a certificate to a person who completed a program that was very weak. The state department would not know that the person completed a substandard program, for the weak programs are masked when blanket approvals are given to excellent and poor programs alike.

While these concerns are not news to the NCATE office, the problems remain unsolved. Fortunately, there is an extensive study underway that will make proposals about how these problems can be corrected.

THE RISE OF TESTING AND PERFORMANCE ASSESSMENT

At the present time, many states grant certificates to people who have either completed the courses or the program in their respective fields; however, there is a significant change in the air. Many states are adding two requirements to the long-standing one of the completion of a state-approved college teacher preparation program. These are knowledge tests and demonstrations of effective teaching on the job. In these states, all three of these basic requirements must be met for full certification.

A recent report by Sandefur (1984) shows that 30 states now have some kind of knowledge test that is a requirement for certification, and 13 states require demonstration of successful teaching during their first few years on the job. Also, 25 other states report that they are planning for this requirement.

With these developments, the completion of an approved program becomes only a part of the total certification process.

THE RESULTS

We who administer the approval process in the states believe that effective programs of preparation have resulted from the state program approval process. These evaluations have raised the level of professionalism, and the few studies that we have implicitly demonstrate that teachers who complete these programs are receiving fine ratings by their school supervisors and principals during their first years of teaching.

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Section Four

Federal Involvement in Teacher Education

The federal government's role in teacher education has a changing and, at times, nondescript character. Most recently, federal efforts have been directed primarily at questions of equity and quality. Federal mandates and programs have been centered on creating the "conditions of opportunity" for teachers and students and for developing incentives to attract higher ability teachers to classrooms.

In the final chapter and section of this volume, Florio identifies the various options available to the federal government and to teacher educators as they become a part of the reform juggernaut. Federal efforts with respect to teacher education are not new. Historically, most of the government's involvements have been specialized and categorized. The preponderance of current federal programs are limited to helping teachers of special student populations, such as the handicapped, or to those in special teaching areas (e.g., mathematics). Regrettably, the programs typically have had limited impact because of the short duration of program funding. Institutions and policies are sufficiently resilient to change so that federal efforts of limited duration are unable to have a substantial effect. Further, because many programs are poorly timed, or lack direction, or are inadequately defined, they result in cosmetic changes that are short term in nature and fail to influence more profound structural components of teacher education.

Florio suggests that federal program designs and the provision of funds in the future must be very different if teacher education is to be elevated in status and if teachers are to receive adequate training. To accomplish this, several changes are needed in the processes and practices of policymaking and program development in teacher education. First, teacher educators will need to become a part of the political dialogue. They will have to become partners in designing and structuring programs, not passive participants who implement without ownership. Second, those outside the teacher education community must recognize the limitations of professional training. Professional preparation is a starting point for helping prospective teachers learn essential teaching competencies. Improving teacher education programs is only a part, a small part, of the total reform mandate. If it is true that the best and brightest teachers do not take teaching jobs or quit soon after they start teaching (Pigge, 1985), then simply attracting better individuals into teaching will not suffice. Questions regarding the conditions of teaching and job satisfaction will also need much more serious attention. The bottom line is that funds must be directed where they can make a difference. It may be ludicrous to spend millions attracting better teachers if educators are unable to ameliorate the school conditions that cause "new" teachers to leave teaching.

Finally, teacher educators, indeed all those directly and indirectly involved in teacher education, must begin to think in terms of partnerships. The adversarial postures of the past decades must be dropped, and all those actively engaged in seeking better classroom conditions for student learning must become advocates of practices and policies that have a collective salutary effect. The fractionalized nature of the educational community almost assures enervation. As Florio suggests: "Alliances will need to be strengthened and extended in order to gain passage of new initiatives or to sustain and expand existing federal contentions to teacher education. . . . It will take a concerted effort by the education community . . . to turn the attack on teacher education into a major opportunity for positive reform."

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XIII

Excellence in Teacher Education: Options for a Federal Partnership

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Education is at its highest point of political saliency since the middle of the 1960s. Two dozen or so reports on the condition of education—ten of broad national scope—were presented to the nation in 1983. National attention has been primarily focused on secondary schools, mathematics and science education, and the condition of teaching (quality of recruits, working conditions, and supply). However, the full reports and subsequent commentary include every level of education.

Most recently, teacher education has been the center of criticism and concern. Teacher education issues are not new—low academic ability of students, lack of rigor, low status and support within colleges. Public salience of these concerns represents opportunities for policy action at various levels of education governance—institutional, local, state, and federal.

Many of the 1983 reports were launched by a brief public awareness when national news magazines and television called attention to the condition of American high schools in 1979. In 1982, the public began to be particularly concerned with the mathematical, scientific, and technical literacy of high school and college graduates. Following the release of the National Commission on Excellence in Education report, *A Nation at Risk*, the President discovered that education represents a rich source of "political capital." Similarly, governors believe that an effective system of public schools is a major attraction for growth-oriented business and industry.

There are four reasons why education has become a critical social issue:

1. THE AMERICAN DREAM. Education is still part of the American dream and is seen as a critical means to upward mobility.
2. SMARTER JOBS. Changes in the workforce will require employees to have more technical or thinking skills if they are to gain employment in jobs that will allow them to maintain or improve their standards of living.
3. COMPETITION. American workers must be more productive and better educated if the nation is to be competitive in international markets—the future of American economic growth.
4. EDUCATION IS IN TROUBLE. The national reports indicate that American education is not working adequately—particularly secondary schools and the teaching profession.

We have seen already a first set of reforms sweep the nation's schools. For the most part, the first wave can be described as "cheap" fix reforms—raising high school graduation or college admissions standards, demanding more homework, increasing student performance testing, testing teachers in subject areas, recognizing outstanding teachers, students, and schools. More difficult reforms—master teacher programs, retraining teachers, improvement of curriculum materials, increasing academic time—are meeting problems of cost and implementation. However, there are hopeful signs of improvement, and serious efforts to reform the schools are underway.

Most of the national reports and many of the more enlightened reform efforts do not engage in "teacher bashing." In fact, many of the reports paint a sympathetic view of the teacher in American high schools—overworked, burdened with bureaucracy and conflicting demands, and faced with unmotivated students and little home/parent support. Furthermore, teachers are seen as being the "victims" of poor preparation and few useful professional development resources.

The condition of teaching, the lack of employment for many certified teachers in the 1970s, and poor teacher salaries have combined to make the noble teaching profession unattractive. It has almost become trite to point out that there are no more "captive" populations of bright women and minorities who see teaching as one of their few acceptable careers. National reports point out that teacher education students are drawn from the lowest ranks of high school students. Furthermore, the most academically able teachers are the first to leave the profession. And, the rewards for furthering a teacher's education are almost guaranteed to "promote" talented teachers out of classrooms.

These factors coexist with increased demands for new teachers to teach children of baby boom parents and to fill existing shortages in mathematics and science classrooms—exacerbated by increased academic standards. All of the above force the repeated question: How do we recruit, educate, and maintain teachers with the knowledge and talent needed for new and expanding literacy demands?

TEACHER EDUCATION: OPPORTUNITY OR SCAPEGOAT

If teachers are given a sympathetic view in the national reports, teacher education is not. Teacher preparation and inservice education programs, and the high education institutions providing them, are seen as weak, resistant to reform, and, in some cases, as being part of the disincentive for bright college students to enter the teaching profession.

One report on teacher education and certification, *The Making of A Teacher* (Feistritzer, 1984), paints a bleak picture of teacher education programs and their students. According to Feistritzer, too many teacher education programs admit anyone in the institution, offer few academic challenges, are avoided by bright students, and—along with state certification systems—present few "rights of passage." Furthermore, the most academically rigorous colleges and universities seem to be those which have lost the most teacher education students. Many of the research-oriented higher education institutions are not actively engaged in teacher education at all.

The purpose here is not to go into all of the possible reforms that would improve teacher education—preservice and continuing. In fact, there are many who claim that the condition of teaching and teacher salaries are far more important to the improvement of teacher education than direct reform. That is, bright, talented students will not enter teacher education programs unless the teaching job is made more professionally and economically attractive. Others claim that teacher education will be seen as a symbol of the poor public regard for teaching unless it meets the demands and mystique of more prestigious professions.

This report will point out ways to encourage reform that will turn the current criticisms on teacher education into opportunities. Otherwise, teacher education again will be seen as the scapegoat of a beleaguered profession. The report will concentrate on the options available to the federal government as it looks for ways to join state and local partners in the reform of American education.

THE FEDERAL ROLE IN TEACHER EDUCATION

The federal government is not new to teacher education efforts. Teacher education programs—preparation and inservice—are currently limited to a small incentive program to attract promising teacher candidates and reward talented teachers or to assist teachers of special student populations (handicapped, limited English proficient—LEP) or in particular subject areas (vocational education, mathematics, science, foreign language). Two "general" teacher education efforts, Teacher Corps and Teacher Centers, were folded into the *Education Consolidation and Improvement Act* Chapter 2 "block grant" in 1981. Several federal teacher education programs were allowed to lapse (e.g., *Education Professions Development Act* and NSF science education). Some suffered the "authorization without appropriation" fate—continuing education programs in Title I of the Higher Education Act.

Congress enacted the Talented Teachers Act in 1984 to attract promising and retain outstanding teachers. And, the House of Representatives version of the *Higher Education Act* reauthorization (passed in late 1985) expanded teacher education authorizations to include several new or revitalized provisions—teaching academics for intern-beginning teachers, professional development centers, teacher education improvement grants, collaborative programs with schools, colleges, and businesses, and programs to recruit adults who would like to change their careers to teaching. However, huge budget deficits and pressure to cut federal spending make it unlikely that all of the above will receive actual appropriations. Some programs, such as the scholarship and stipend incentive projects, may serve as incentives for state governments which have also established teacher recruitment projects.

GENERAL PROBLEMS

With the exception of federal teacher education in special need areas—poor, handicapped, LEP—there is little evidence of federal program impact. One of the reasons for the lack of evaluative evidence is the limited duration of past federal teacher education efforts. Major problems with past efforts can be categorized as follows:

Poor timing. By the time programs were authorized and implemented, the purpose of the program shifted (teacher shortage vs. need for inservice training).

Lack of direction or diffusion of purpose. Either because of a lack of congressional consensus or poor administration, many programs attempted to serve too many purposes for the available funds—pleasing no one and gaining no sustaining constituency.

Poor information. Teacher education programs are idiosyncratic, resistant to keeping data on students, and suspicious of external evaluations. Therefore, there was often little reliable descriptive or evaluative data on teacher education programs. As a result, policymakers are often left with no answer to the question, "what has the program done?"

Delayed effects. Teacher preparation programs do not have an immediate impact on the desired outcomes of public policy. They take time, effects are difficult to document, and impact is almost impossible to separate from other factors affecting student performance.

Difficult unpopular tasks. Many federal teacher education programs were aimed at the most difficult assignments—helping low income and other students with special needs. Furthermore national concerns about the general quality of schools may have decreased previous interest in students with particular problems.

Quantity over quality. General teacher education efforts by the federal government seem to enjoy support when the public is concerned about a teacher shortage—baby boom students or mathematics and science teacher education. Federal efforts to improve teacher quality have been more difficult to sustain, e.g., mathematics and science education at the National Science Foundation, teacher centers, and general professional development.

A CHANGE IN CLIMATE—THE FEDERAL ROLE

The national drive for educational reform coupled with survival concerns by those responsible for teacher education may present a more favorable climate for federal teacher education initiatives and their subsequent implementation and survival. Other factors, many of which were nonexistent when previous teacher education programs were attempted, could launch and sustain teacher education programs because:

1. There is a more focused consensus on the need for improved teaching in basic academic areas.
2. Educational research and development efforts have important knowledge resources dealing with effective teaching, schools, and curricula that can be included in teacher education programs.
3. The threat of real competition to teacher education monopolies may motivate higher education institutional leaders to take teacher education reform efforts seriously.
4. There is a favorable climate for partnerships between schools and colleges and among education institutions and the private sector.
5. The federal government is more "outcome oriented," leaving project prescriptions to local and state initiatives and reducing central engineering tendencies.
6. National economic interests are deeply concerned about the character of schools and the personnel responsible for the future national workforce.

The federal government has served three general functions over the past several decades. Teacher education programs, if the functions are sustained, must serve one or more of the following:

> *The equity function.* The federal government works to provide equal education opportunities regardless of personal circumstance, in order to improve the life chances of its citizens.
>
> *The knowledge/information function.* The federal government is responsible for producing and/or sharing knowledge gained from research, development, evaluation, and data collection.
>
> *The quality improvement function.* The federal government supports and provides assistance to states, localities, and institutions to enhance their capacities to improve educational practice and realign education resources to meet social and technical changes.

These functions can be served through several means (current or past teacher education examples are provided):

(1) *General financial assistance:*

The *Education Consolidation and Improvement Act* (ECIA), Chapter 2 block grant provides funds to local school districts which may choose whether to engage in a specific program of professional development.

(2) *Categorical or "targeted" assistance (special projects, populations, or subject areas):*

Congress funded the *Talented Teacher Act* for the first time in 1985. Passed in 1984, the *Act* authorizes two projects to support teacher preparation: (a) scholarships for academically successful high school graduates who agree to prepare for teaching careers and (b) stipends for talented teachers and their schools. Teacher education and professional development funds are included in equity programs for the disadvantaged (ECIA Chapter 1), handicapped *(Education of the Handicapped Act)*, and bilingual education (LEP students). Other targeted funding is subject-matter based such as vocational education improvement programs and the recently enacted *Education for Economic Security Act* (EESA) targeted on inservice education for teachers of mathematics, science, computer learning, and foreign languages. EESA also includes a provision for teacher institutes, scholarships for prospective teachers, and fellowships and awards for current teachers.

(3) *Regulation:*

The federal government recognizes postsecondary education accrediting bodies; however, accreditation for teacher education is not required for receipt of federal funds. Each program authorized and administered by the federal government also has regulations that set priorities, intentions, evaluation, and reporting requirements. In addition, general and program-specific regulations covering competitive discretionary grants set the criteria for selection (including points assigned to priority purposes for proposal reviewers). These regulations can shape the direction of a program. Regulations caused a shift from recruitment and initial training to an emphasis on inservice and professional development for existing teachers in the (no longer authorized) Teacher Corps program.

(4) *Research and development (evaluation, policy study, and statistical services):*

The federal government supports research and development activities focused on effective teaching, teacher preparation, and inservice training through the Office of Educational Research and Improvement (National Institute of Education). Federal funding includes support for regional education laboratories, R&D centers and institutes, and dissemination programs. The National Diffusion Network supports the dissemination of exemplary federal programs including staff development efforts in programs for special populations. Research, development, and dissemination programs are also supported in the vocational, bilingual, and handicapped education areas. Most federal programs include evaluations, and the National Center for Education Statistics collects data on the condition of teacher supply and demand.

(5) *Direct service and technical assistance:*

The federal government provides few direct services; however, there is support for technical assistance through states, independent contractors, and centers established to serve special purposes. The federal government supports technical assistance and/or materials development efforts for teachers and teacher education in the areas of civil rights, bilingual education, vocational education, desegregation, and aid to the disadvantaged. In addition to their R&D functions, some regional education laboratories provide technical assistance to state and local education agencies within their regions.

(6) *Persuasion or leadership through the power of federal offices and "symbolic acts":*

Federal officials have the power of high office to capture and sustain public attention on critical education issues. Presidents have rarely used their "bully pulpits" for education; however, when they choose to do so they can focus the public eye on national education concerns. President Johnson made education for the disadvantaged a national issue in the mid-1960s and President Reagan, following the release of the Commission on Excellence report, made educational standards, discipline, and teacher rewards national issues. The President carries a built-in national media audience unmatched in the nation. Although some of the statements and speeches seem simplistic to the student of education issues, the benefit of national leadership can establish a climate for meaningful reform.

Another way in which Congress or federal officials can demonstrate the importance of an issue is through a symbolic act. Presidential awards for outstanding mathematics and science teachers at the National Science Foundation and the Department of Education's program of recognizing exemplary high schools provide two recent examples of leadership through symbolic action.

Progam Must Meet Salient Challenges

Federal teacher education options can be reviewed along the lines of these functions and roles. However, they must also fit into one of the goals related to improving the teaching workforce. National concerns about the quality of teaching and the types of students likely to enter teacher education programs will force policy initiatives to meet specific challenges. That is, if educators, teacher educators in particular, are to be successful in initiating and, more important, sustaining federal teacher education efforts, they must be part of the political dialogue.

Not every idea or program must match the popular concerns of the moment; however, they must be related to the issues policymakers face. Programs that suggest new or expanded federal initiatives must have affirmative answers for one or more of the following questions. Does the initiative help recruit and select high quality candidates into the teaching profession? Does the program effectively prepare teachers to teach in the core academic areas of English (including reading and writing), mathematics, the sciences, technology, or communication (including foreign language)? (The arts, humanities, and social studies may be included if the initial group is seen as the top priority.) Does the program lead to more effective teaching of "higher order" thinking or "learning to learn" skills needed for future success in education and work? Does the program help educational institutions maintain effective teachers currently in the workforce?

In addition to these general concerns about recruitment, selection, and maintenance of an effective teaching force, there are specific issues about teacher preparation programs. The following perceptions provide an outline of concerns:

(1) Teacher education programs lack adequate field or practical experience.

(2) Teacher education students do not spend enough time in regular academic subjects and are in need improved mastery of content.
(3) Teacher education programs lack academic rigor in both the substantive and professional course areas.
(4) Teacher education programs are not selective. They admit any student already accepted into the parent institution of higher education.

Regardless of the veracity of these claims, they form a general perception expressed in both national reports and general press/media coverage of education. Teacher education reform efforts must be seen to confront these concerns or face a loss of public support.

When *A Nation at Risk* was released, public opinion polls indicated that taxpayers were ready to spend more on education. In fact, they were willing to increase taxes to support improved education. They were not willing to pay more for the educational status quo.

The same factors will affect initial and sustained support for teacher education. No matter how conscientious, it will not be good enough to point out erroneous public perceptions or generalities found in national reports. Teacher educators recognize the misperception that prospective secondary school teachers spend most of their time in "methods courses" instead of arts and science subjects. However, trying to refute teacher education criticism with statistics about the number of course hours spent in education or arts and sciences will be of little use. Similarly, pointing out that few academically advanced students will enter teacher education unless salaries are raised seems to avoid the core criticisms of teacher preparation.

Albert Shanker, American Federation of Teachers President, has been asking his members to become active participants in educational reform. He recognizes that some of the reports and more than a few of the "quick-fix" reform recommendations are misguided. However, he is unwilling to reject a discussion of the criticisms or reforms simply because they are wrong. He wants AFT leaders to use the reports and reform proposals to launch a productive discussion about core problems and implementation issues. Shanker says that he does not believe that merit pay plans will work. However, he is willing to entertain such proposals in order to gain general increases in salaries, better working conditions, improved evaluation programs, and a more positive public perception of teachers' willingness to improve. Teacher educators could learn much from Shanker's strategy.

FEDERAL OPTIONS

Federal teacher education efforts and those currently proposed include various types of assistance that can be categorized under four *broad* *purposes:* (a) recruitment and selection, (b) teacher preparation, (c) inservice and professional development, and (d) information and knowledge resources (for education agencies and institutions responsible for teacher education). The following outline provides an overview of the options available for consideration. It is not the intent to focus on existing programs for special populations. Rather, the options in this report are for excellence in general teacher education or for broad subject areas such as mathematics and science education.

Recruitment and Selection

Recruitment options are designed to provide economic incentives for individuals who might not otherwise seek teaching careers, or enter to teacher education programs. Programs often require a "service-for-reward" exchange provision. That is, those who receive assistance must agree to teach for each year of benefit. Although there is little evidence of the long-term success of such efforts, they may provide a pool of more able students for temporary or short-term teaching careers.

1. *Scholarships* for talented high school graduates or college undergraduate students who will enter teaching, particularly in areas where there are shortages of teachers (e.g., mathematics, science, foreign language). Similar options are proposed for unemployed teachers willing to retrain for shortage areas and for recent mathematics and science graduates who will begin master of arts in teaching or similar programs. Recent examples:

   Education for Economic Security Act (EESA PL98-377) program of "Congressional Merit Scholarships" for prospective mathematics and science teachers.

   The Talented Teachers Act scholarship and stipend program—The Carl D. Perkins Scholarships in a proposal to amend Title V, Teacher Education, of the *Higher Education Act* (HEA).

2. *Loan subsidies* in the form of "forgiveness" or reduced rates are other economic options to entice prospective teachers. The National Direct Student Loan Program (HEA Title IV) provides loan forgiveness for each year the loan recipient teaches in an area of particular need or in a national priority area such as teaching disadvantaged or handicapped students. One suggested program would be to forgive part or all of the guaranteed student loans (GSL) of recent mathematics or science (or other high need area) graduates who agree to enter teaching careers.
3. *Tax credits or forgiveness.* Several members of Congress have introduced legislation that would provide tax incentives in the form of credits or deductions for (a) employers who will provide

teachers or resource persons for schools with specific shortages such as mathematics, science, and technology; and (b) teachers who will accept assignments in designated shortage areas, serving a target population or working in difficult areas (remote rural or low income urban centers).

One recent proposal even suggested a forgiveness of the federal income tax for up to four years for qualified teachers in acute national shortage areas.

4. *Salary supplements* for all teachers and specifically for mathematics and science education teachers have been suggested by some presidential candidates.

Incentives to attract more academically capable students into teacher education and teaching indirectly affect the goal of excellence in teacher education. The students may improve the public image of teacher education; however, they will only affect the quality of the programs through the demands they place on institutions preparing teachers. Incentives may serve at least a temporary goal of improving the quality of candidates who are willing to go through more rigorous or extensive training.

Some teacher education or teaching career incentive options are already in existence or have been recently enacted. There is little available information on their potential success. The major advantage is that they may provide a pool of talented individuals for teacher education programs. Such programs do not provide immediate relief for shortage areas with the exception of incentives for graduates. The key question is whether policymakers are willing to expend funds for recruiting more talented teachers who may stay in the profession for a short period of time.

The state of the economy (i.e., employment and fiscal policy) may have important implications for the success of recruitment incentives. Students may be willing to have their scholarships shifted to loans if the general salary differential is great enough between a career in teaching and business or industry. Given the focus on tax reform with fewer and fewer credits and deductions tax credit proposals will be less viable.

The political and fiscal climate facing the Congress precludes high cost initiatives or revenue losses. It is unlikely that at any time in the near future Congress will support salary tax credits or direct salary subsidies. Scholarship and loan forgiveness programs will be most likely to gain approval—the Talented Teacher Act received a modest $10 million appropriation for fiscal year 1986. Key issues for excellence in teacher education will be whether recruitment efforts are matched by improved teaching work (climate and practice) and the quality of teacher education programs.

Teacher Preparation Program Improvement[1]

1. *Program Improvement Grants to Institutions of Higher Education (Schools of Education).* Competitive grants would serve one

> or more of the following purposes: They would (a) strengthen program design including efforts to raise admissions requirements and screens, improve subject matter competence, and extend practical classroom experience; (b) improve teacher education in the use of new technologies such as computers, video, electronic communication; (c) nurture consortia of higher education institutions to strengthen faculty offerings and to increase exposure to research and other knowledge resources; (d) develop teacher education materials and technology (e.g., National Science Foundation provides grants in the precollege mathematics and science education program for inservice and perservice teacher education materials development and demonstration); (e) improve teacher education faculty and acquaint them with recent research on teaching and school effectiveness, curriculum materials, text selection, higher order learning skills, and so on; (f) develop and sustain cooperative teacher education programs involving teacher education, arts, and sciences faculties within colleges and universities; (g) conduct applied institutional research and assessment to inform teacher education improvement efforts; and (h) support demonstration (evaluation) projects in teacher education and recruitment.

The history of several teacher education and related professional development efforts shows the dangers of many diffused purposes. Two major teacher education initiatives (e.g., NSF science education programs and the *Education Professions Development Act* were allowed to lapse because Congress did not believe they represented effective efforts to improve the quality of teaching.

There are current opportunities to improve on past efforts. National Science Foundation science education has been recently revived due to the crisis in the math and science teaching force. HEA Title V's reauthorization presents an opportunity to initiate a teacher education improvement effort. However, if the programs offer too many options, remain diffused in purpose and identity, and gain only a fragmented constituency, they will again be vulnerable when the "crisis in education" is no longer headline material.

Many of the suggestions and options are valid. However, there needs to be a limited set of easily identifiable purposes (e.g., increased admissions standards and academic rigor); increased exposure to practical settings; subject matter competence; and improved presentation of valid, reliable research information on effective teaching, schooling, and learning. At least descriptive evidence, if not evaluations, could then demonstrate that the programs were making progress toward clearly understood themes (rather than a laundry list of actions).

2. *School—Higher Education/School of Education Partnership* grants have been suggested to improve and/or extend the practical experience part of teacher education. Such programs would also share faculty resources—including the use of practicing teachers and technological resources. Grants would be applied for jointly and would encourage cooperative planning. When coupled with career development programs or master teacher programs such partnerships would increase teacher education candidates' exposure to effective teachers.

One experimental school/college partnership suggestion is to fund "teaching schools" or academies. These exemplary elementary and secondary schools would provide intensive internship exercises for students in various stages of the teacher education program. The schools would work with one or more higher education institutions.

3. *Education—Business/Private Sector Partnerships* could be supported or stimulated with federal support. Such partnerships would be designed to improve teacher education programs in the following ways: (a) students and faculty in teacher education programs would be exposed to private sector resources including new technologies; (b) practicing scientists, engineers, and others would be in a position to inform teacher education programs about the intellectual needs of the technical workforce; (c) faculty and business persons would engage in exchange programs and provide intellectual resources to each institution; and (d) new alliances would be formed for the improvement of education.

Partnerships have several advantages. First, they require that each participant add to the resource pool of the joint effort. Second, they help reduce inaccurate assumptions about institutions and the human resource potential of each participant. Finally, the partnerships formed for specific purposes (e.g., teacher education, resource sharing planning) lead to broader alliances. Teacher educators need more powerful allies in the teaching and schooling field. Educators need to nurture the broad-based political support of the private sector.

Recent examples of school/business alliances have paid handsome returns in state and local school fiscal policy decisions. The California Business Roundtable helped secure recent state school aid increases. The Alliance for Public Schools in New York City is an important force promoting public education in that city.

Education partnerships are also popular with Congress and the current Administration. They could be of additional benefit to teacher education. Congress might be more willing to invest in teacher education improvement if such efforts are seen as joint endeavors involving schools and the private sector. They may add a legitimizing force to reform proposals and reduce the fear that higher education institutions—being resistant to change—would simply spend the funds to continue the status quo.

Maintain Effective Teachers—Improve Inservice & Staff Development

1. *Inservice Education*

Broadly discretionary *Inservice Education* was damaged by the block grant in 1981 (e.g., Teacher Corps and Teacher Centers). However, there are several existing and emerging federal teacher education programs aimed at the in-place teacher. The special population programs for disadvantaged, women, handicapped, and LEP children provide for staff development and inservice training. The National Diffusion Network includes some federally supported dissemination and inservice training. The vocational education act supports inservice workshops and training for classroom teachers.

Recently enacted mathematics and science education legislation, *Education for Economic Security Act* (PL 98-377), makes inservice education and teacher training the core of the Education Department (ED) program. The legislation (including foreign language and computer learning) makes teacher training and inservice education programs central to the 70% of state grants for elementary and secondary schools and 30% for institutions of higher education (in partnership with one or more schools). EESA could provide a natural experiment and demonstration of inservice education in curricular areas; however, EESA funding was halved (from $100 to $50 million) in FY86 as a result of the budget deficit reduction effort.

2. *Fellowships and Awards*

Teacher fellowships have been included in both the National Science Foundation (NSF) and in the more general Talented Teacher Act for the Department of Education. In addition, NSF Presidential teacher awards carry some fellowship funds for teachers to use in their schools. The talented teacher fellowships provide support for teachers to travel, study, conduct research, consult, and engage in planning and development efforts. Mathematics and science teacher fellowships are provided to outstanding teachers who may use funds for improvement of their teaching or schools.

Outstanding teacher awards are one of the symbolic efforts that federal officials may use to enhance the status of teachers while rewarding individual effort. Awards for oustanding mathematics and science teachers have been initiated at the National Science Foundation and the Department of Education recognizes outstanding high schools. There are also the annual local, state, and national "teacher of the year" recognition programs.

Fellowships may play a useful role in helping good teachers become better and keeping teaching an attractive profession. They may also enhance staff development efforts by providing fellows with new knowledge and other staff development resources.

Two major concerns arise with fellowships. First, limited funds preclude all but "outstanding" teachers. This leaves out adequate-to-good teachers who may be most in need of professional development. Second, they may encourage outstanding teachers to leave the profession. This is not to say that fellowships cannot be effective; however, like awards and scholarships, they are unlikely to have a long-term positive effect in isolation. If their local school climate and working conditions are positive with high professional development norms, fellows can extend their knowledge and skills to others. If not, they may feel isolated and unable to use what they know.

Awards (as symbolic devices) promote the image of the profession but do little for inservice and staff development advances. They may have some marginal effect on maintaining outstanding teachers and public perceptions about the teaching force. Although it is difficult to gauge the national impact of teacher award programs, they play an important part in the persuasion and leadership roles of federal officials. Needless to say, they are an inextricable part of education politics and must be seen as a means for educators to extend the political capital of elected officials—the President and members of Congress. It is no mistake that mathematics and science teaching awards are called the "Presidential Teaching Awards" and scholarships and fellowships are called "Congressional Teaching Fellowships" in current and proposed legislation.

Other staff development and inservice options include:

Effective Schools. Several members of Congress have suggested making the "Chapter 2 Block Grant" more focused on effective school development. This would require matching block grant funds with support for laboratories and technical assistance grants at the National Institute of Education. The purpose of the grants would be to provide Chapter 2 schools with the most recent research evidence on effective schools, teaching, and learning in the higher order areas.

Teacher Resource Centers. The American Federation of Teachers (AFT) and the National Education Association (NEA) are the strongest advocates of teacher centers. The federal teacher center program was folded into the 1981 block grant. The NEA and AFT have recommended their reauthorization in the HEA as critical "teacher led" staff development efforts. The evidence from the previous program indicates that teacher centers were the most classroom-focused inservice or staff development programs of the federal government.

Workshops and Summer Institutes. The NSF science education programs and the ESAA authorization provide for special institutes and workshops in math and science education. These institutes serve two purposes (a) to provide intensive education in substantive areas of instruction to improve the subject matter knowledge of teachers—particularly in rapidly changing fields such as science and technology—and (b) to provide teachers with up-to-date research information on teaching and learning and effective teaching strategies.

Teacher Research Grants. Several earlier legislative proposals provided for small grants for teachers to conduct applied, institutional research in local settings. NIE-funded R&D institutions have also initiated cooperative research programs including teachers as part of the research team—Institute for Research on Teaching "teacher researchers" and the Far West Laboratory cooperative research program. NIE also funded the AFT's Educational Research and Dissemination project designed to "broker" research findings into practical forms for classroom use. Such efforts allow teachers to become familiar with research studies and—at the same time—provide a richer reality base to research questions.

3. *Teacher Career Plans—Master Teacher Programs*

Various career ladder plans have been proposed in the wake of national reports calling for improved professional development, merit pay, differentiated staffing programs, and so on. The possible effect of a career ladder program is threefold: (a) to provide inservice and staff development opportunities that keep effective teachers in classrooms (many local continuing education policies reward teachers for advanced education by promoting them out of teaching, (b) to allow teachers to assume professional development roles for themselves and their colleagues (e.g., curriculum design, test development, inservice education, and research), (c) to become active partners in preparation programs for interns and beginning (apprentice) teachers, and (d) to develop and implement teacher evaluation programs. The federal government could play several critical roles in the career ladder/master teacher reforms by funding model or exemplary programs (disseminate example plans), supporting education resource organizations (labs, centers, state or regional service organizations) to offer technical assistance to local school districts in the design and implementation of new teacher career ladder programs; supporting evaluation development programs to establish fair and cost-effective teacher and school-site administrator evaluation programs; providing, as part of a school/college partnership program, support for innovative experiences for master or senior professional teachers; and commissioning broad based assessments of state and local master teacher—career development programs to determine if they help keep experienced teachers in the profession, help schools develop effective staff development programs, change the experience of student and beginning teachers, can be shared and adapted in other locations, and have an impact on instructional quality and learning.

The inservice/staff development options share several common goals:

To upgrade the knowledge and skills of the existing teaching force.

To make teaching careers more attractive and enhance the professional status of the profession.

To change the reward system that ties continuing professional education to "promotion" out of the classroom.

To provide the most immediate impact on the quality of school instruction.

Federal proposals should be judged against these goals. Inservice and staff development programs have the advantage of close proximity (time and distance) to current school practice. Unlike preparation programs and incentives for talented students to enter teaching, professional development programs are designed to reach the current teaching force.

Two factors should be understood when making judgments about the federal mix of programs for preparation and inservice teacher education. First, during the next decade, a vast number of current teachers will reach retirement age, and the offspring of baby boom parents will require schools to hire a large number of new teachers. At the same time, demands on the current teaching force are already escalating. States are requiring more coursework in academic subjects. Literacy demands for new technologies and higher order learning skills are advancing. And employers want employees who are able to learn different skills and work requirements on the job.

Therefore, it is not a choice of which type of teacher education deserves the highest priority. Rather, policymakers and educators will need to construct an appropriate mix of efforts to improve inservice and preparation programs. A program that is designed to improve both existing teacher performance while assisting interns and beginning teachers may be the most attractive and cost effective.

4. *Partnerships*

The school/college, education/business, and school/research resource agency partnerships outlined in previous sections all apply to staff development concerns. The federal government can play an important catalytic role in stimulating new cooperative ventures to enhance inservice and staff development efforts for teachers. School/business partnerships, in addition to providing human staff development resources, offer opportunities for school faculty to experience summer work in technical and academically related fields. School/college partnerships, in addition to the above, provide opportunities for the cooperative development of inservice programs that provide a balance of subject mastery and informed pedagogy.

Partnerships provide more cost-effective use of knowledge and technical resources. Recent work in cognitive science (the study of thinking and the teaching of thinking skills) makes it critical for upper elementary and secondary school teachers to be aware of recent research advances in higher order academic skills—reading, writing, problem solving (math and science), and analysis. Both types of partnerships will be needed for teachers and students to become technically literate, and able to use advanced instructional technologies. Few schools will be able to afford the full range of technology, and new partnerships will make access to technology both useful and affordable.

Inform—Provide Knowledge Resources

The education knowledge function has the longest precedent among federal education roles. The federal government has been responsible for collection and dissemination of information on the status of American schools and colleges for over 100 years. More recently, research programs in the Office of Education and Office of Educational Research and Improvement (NIE) have focused on teaching and learning. The following represent current teacher education (and related) information/knowledge activities of the federal government:

1. The National Center for Education Statistics (NCES) provides statistical data on the supply, condition, and demands of the national teaching force.
2. National research centers and institutes provide information on teaching, learning, teacher education, effective use of instructional technologies, and related educational practices.
3. Regional laboratories and R&D information exchanges are designed to provide R&D services, technical assistance, and research information "broker" services to state and local education agencies.
4. The National Assessment of Educational Progress acts as a national barometer of student achievement.

Funding cuts over the past three years have all but eliminated individual grant and contract programs at the Institute. In the past, NIE supported individual research in the above areas along with dissemination projects in state departments of education, and other resource institutions.

One outstanding project was the effort to "broker or translate" research findings on teaching into useful forms for classroom teachers—a program conducted by the American Federation of Teachers. This program has won several awards and has several unique attributes: researchers worked closely with teachers in the design and implementation of the project; current and former teachers carried out the project making it more "legitimate" to their classroom colleagues; and a powerful education group increased its respect for and use of educational R&D.

5. The National Science Foundation conducts research and development programs on mathematics and science teaching and learning in both the Science and Engineering Education Directorate and the Biological, Behavioral, and Social Sciences Directorate. In addition, the science education directorate is launching a division of "studies and program assessment" to judge the progress of precollege mathematics and science education reforms, assess the condition of math and science teaching at all levels, and determine teacher training and materials development needs.

These programs serve important goals; however, they often have been inadequately funded or—in the case of NSF science/math education and NIE grants programs—have suffered periodic dormant periods. The uneven nature of program support has led to inadequate knowledge and information resources. NCES, for example, is unable to collect or analyze teacher supply/demand data on an up-to-date, state-by-state basis. Teacher education program information is barely existent. There is little solid descriptive data or clearinghouse information on effective programs. Much more needs to be done to broker existing research information. The Teacher Center experience and the expected demands arising from inservice and staff development efforts will vastly increase the demand for knowledge and information on effective teaching, teacher education, and higher order academic learning.

Federal options in teacher education cannot be judged in isolation. They must be seen as part of local, state, and federal efforts to reform American educational practices. Teacher education reformers are able to use the wave of educational reforms to enter the national discussion on educational excellence. If policymakers and educators learn from past efforts, they can use the policy climate as an opportunity to enhance the quality and public perception of teacher education.

Timing the purposes of federal reforms with nationally salient problems is important. Federal programs must have enough focus on national concerns to gain a sustained constituency. To the extent possible, federal teacher education initiatives should avoid the past problems of poor timing, diffused purpose, and confused goals (e.g., mixing quality with quantity needs). Although programs can serve diverse purposes, they must be able to demonstrate progress on national issues: recruiting high quality teachers; improving the preparation of new teachers; maintaining effective teachers (or improving less effective teachers); and informing institutional, local, and state reform efforts.

The political climate is not easy. The 99th Congress is faced with macro budget and fiscal policy issues. The education programs compete for a small share (about 15–18%) of the nondefense, discretionary federal budget.

Teacher education initiatives and options will be judged against harsh standards. Program goals or options must be clearly drawn and made to fit with realistic estimates of expected appropriations. Educators and policymakers must work together to establish reasonable timelines for program development, implementation, and operation before premature evaluations or assessments are made. Staged assessments are recommended that begin with a description of programs and projects, extend to analysis of affected individuals and institutions, and (only then) look for impact or result.

The federal role in the pursuit of teacher education excellence must be seen as a partnership. Policy options must be judged as supplements to initiatives going on throughout the nation. This chapter provides an overview of options and a commentary on the choices. The federal government has the potential to be a productive partner catalyzing partnerships, stimulating action, and providing needed financial assistance and knowledge resources. The government can also inadvertently initiate counterproductive actions: heavy handed regulations, large promises with few resources, and options designed to bypass rather than confront teacher education issues.

Alliances will need to be strengthened and extended in order to gain passage of new initiatives or to sustain and expand existing federal contributions to teacher education. Teacher education is vulnerable to being a scapegoat. It will take a concerted effort by the education community and its allies in general government and the private sector to turn the attack on teacher education into a major opportunity for positive reform.

Footnotes

1. Reauthorization of Title V of the Higher Education Act is being considered by the 99th Congress. Many of the following options have been suggested by Title V.

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